From: Travis Wells
To: Duvil, Ricardi
Subject: Lab results
Date: Friday, November 9, 2018 3:05:01 PM
Attachments: B8K0802.pdf

FYI...

--
Travis Wells
General Manager
Branch of Public Utilities
O: (541) 553-3246
C: (541) 460-1262

PWS#: 104101247

PWS Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, County: Warm Springs, Jefferson County

Phone: 541 553 1472 **Fax:** (541) 553-3380

Return address for report

Name: Confederated Tribes of Warm Springs

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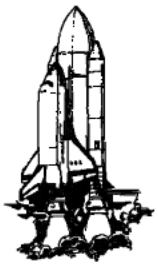
City, State, Zip: Warm Springs OR, 97761



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MICROBIOLOGICAL ANALYSIS
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Drinking Water Program

UMPQUA Research Company
738 SE Glenwood Drive
Bend, OR 97702
(541) 312-9454 Fax: (541) 312-9456
email: *bendlab@URCmail.net*
web: *http://ChemLab.cc*
ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-01

Sample Collection Date/Time: 11 / 08 / 2018 9 : 45

Sampled By: Holliday

Sample Point: Hose Bib

Address: 1540 Tenino Road

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0..74 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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Send Results to: DHS Drinking Water Program - PO Box 14350 - Portland OR 97293-0350 - Ph 971-673-0416

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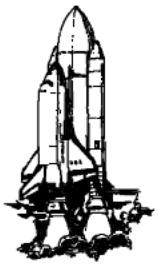

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-02

Sample Collection Date/Time: 11 / 08 / 2018 10 : 10

Sampled By:

Sample Point: Hose Bib

Address: 1620 Foster Street

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.84 mg/L

***If Repeat, Date of initial positive:** ***Original Positive URC Sample ID# :**

Repeat Location:

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other

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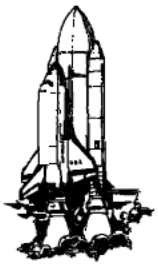

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-03

Sample Collection Date/Time: 11 / 08 / 2018 13 : 07

Sampled By: Dustin Suppah

Sample Point: Yard Hydrant

Address: 2350 Oitz Loop

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.78 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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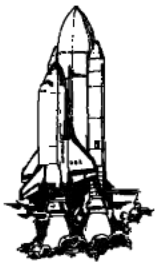

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-04

Sample Collection Date/Time: 11 / 08 / 2018 11 : 46

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 1683 Shepard Lane

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.85 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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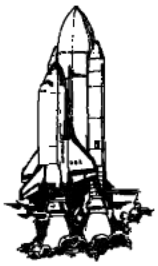

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738 SE Glenwood Drive
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web: *http://ChemLab.cc*
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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-05

Sample Collection Date/Time: 11 / 08 / 2018 13 : 53

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 1297 Eagle Way

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.78 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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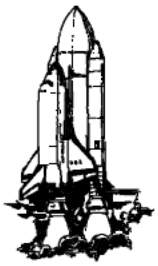

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ORELAP ID# OR100052

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-06

Sample Collection Date/Time: 11 / 08 / 2018 14 : 32

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 2524 Loosh Street

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.73 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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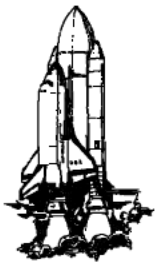

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-07

Sample Collection Date/Time: 11 / 08 / 2018 12 : 33

Sampled By: Dustin Suppah

Sample Point: House Sink

Address: 2493 Sunset Lane

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.77 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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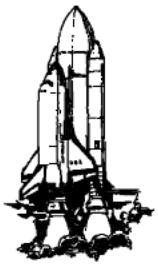

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-08

Sample Collection Date/Time: 11 / 08 / 2018 13 : 57

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 1270 Kot-Num Rd.

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.83 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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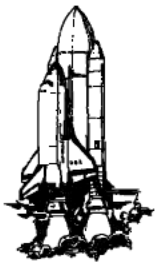

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-09

Sample Collection Date/Time: 11 / 08 / 2018 12 : 49

Sampled By: Dustin Suppah

Sample Point: Yard Hydrant

Address: 2468 Kuckup Lane

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.79 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

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Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
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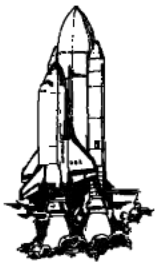

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-10

Sample Collection Date/Time: 11 / 08 / 2018 11 : 14

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 1817 Aut-Ji Road

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.75 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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Send Results to: DHS Drinking Water Program - PO Box 14350 - Portland OR 97293-0350 - Ph 971-673-0416

PWS#: 104101247

PWS Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, County: Warm Springs, Jefferson County

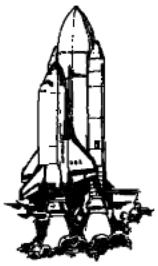
Phone: 541 553 1472 **Fax:** (541) 553-3380

Return address for report

Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, State, Zip: Warm Springs OR, 97761



DHS oregon department of human services

MICROBIOLOGICAL ANALYSIS
Public Water Supplies
Drinking Water Program

UMPQUA Research Company
738 SE Glenwood Drive
Bend, OR 97702
(541) 312-9454 Fax: (541) 312-9456
email: *bendlab@URCmail.net*
web: *http://ChemLab.cc*
ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-11

Sample Collection Date/Time: 11 / 08 / 2018 14 : 40

Sampled By: Freddy Holliday

Sample Point: Hose Bib

Address: 2795 Quail Trail

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.72 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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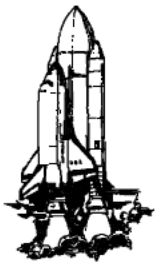
Address: PO Box 1329, Attn Utilities

City, State, Zip: Warm Springs OR, 97761



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ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-12

Sample Collection Date/Time: 11 / 08 / 2018 10 : 00

Sampled By: Holliday

Sample Point:

Address: 1238 Veterans Way

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.73 mg/L

***If Repeat, Date of initial positive:** ***Original Positive URC Sample ID# :**

Repeat Location:

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other

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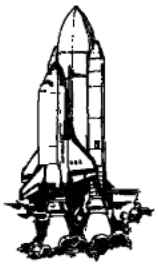
City, State, Zip: Warm Springs OR, 97761



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ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-13

Sample Collection Date/Time: 11 / 08 / 2018 13 : 19

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 2332 High Lookee

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.58 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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PWS#: 104101247

PWS Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, County: Warm Springs, Jefferson County

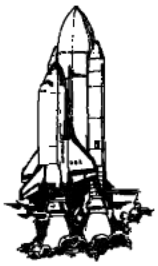
Phone: 541 553 1472 **Fax:** (541) 553-3380

Return address for report

Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, State, Zip: Warm Springs OR, 97761



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ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-14

Sample Collection Date/Time: 11 / 08 / 2018 14 : 09

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 2127 Warm Springs Rd.

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.83 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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PWS#: 104101247

PWS Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, County: Warm Springs, Jefferson County

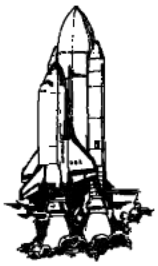
Phone: 541 553 1472 **Fax:** (541) 553-3380

Return address for report

Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, State, Zip: Warm Springs OR, 97761



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web: *http://ChemLab.cc*
ORELAP ID# OR100052

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-15

Sample Collection Date/Time: 11 / 08 / 2018 13 : 44

Sampled By: Dustin Suppah

Sample Point: Hose Bib

Address: 1310-C Deer Loop

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.58 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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PWS#: 104101247

PWS Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, County: Warm Springs, Jefferson County

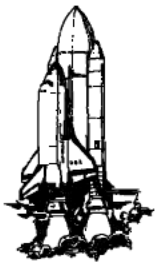
Phone: 541 553 1472 **Fax:** (541) 553-3380

Return address for report

Name: Confederated Tribes of Warm Springs

Address: PO Box 1329, Attn Utilities

City, State, Zip: Warm Springs OR, 97761



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ORELAP ID# OR100052

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☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-16

Sample Collection Date/Time: 11 / 08 / 2018 13 : 33

Sampled By: Dustin S.

Sample Point: Outside Hose Bib

Address: 1370-A Elk Loop

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.78 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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Return address for report

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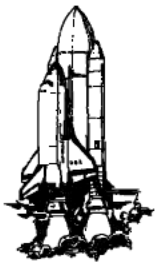

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ORELAP ID# OR100052

(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-17

Sample Collection Date/Time: 11 / 08 / 2018 9 : 30

Sampled By: C. Holliday

Sample Point: Outside Hose Bib

Address: 9046 Tenino Road

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.10 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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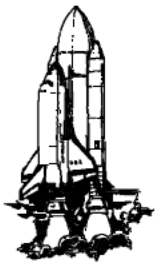
City, State, Zip: Warm Springs OR, 97761



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(‡) ORELAP Accredited Analyte

☐ Results do not meet NELAC Standards - see page 2

URC Lab Sample ID# : B8K0802-18

Sample Collection Date/Time: 11 / 08 / 2018 9 : 15

Sampled By: C. Holliday

Sample Point: Kitchen

Address: 9113 Tenino Road

Sample Type: Distribution Special **Chlorinated?:** Yes **Free Chlorine:** 0.09 mg/L

***If Repeat, Date of initial positive:** _____ ***Original Positive URC Sample ID# :** _____

Repeat Location: _____

LAB USE ONLY

Sample Received Date/Time: 11 / 08 / 2018 16 : 40 **Initials:** J Chauntel Thorsted **Temp:** 11.00 °C

Evidence of cooling: Yes

Analysis Start Date/Time: 11 / 08 / 2018 16 : 49 **Initials:** DEL

ORELAP Method SM 20th Ed. **Coliforms By 9223B - Colilert-18**

Test Results:

Total Coliform (‡)	Absent
E. Coli (‡)	Absent

Analysis Complete Date/Time: 11 / 09 / 2018 11 : 40

Analyst: JCT

Reviewed by: DEL 11/9/2018 12:51:19PM

Dorothy Lynn

Dorothy Lynn For Dan Phillips, Laboratory Manager UMPQUA Research Company **Report Date:** 11/09/2018

Sample Invalidation:

- ☐ over 30 hours
- ☐ leak
- ☐ heavy non-coliform growth
- ☐ other _____

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Send Results to: DHS Drinking Water Program - PO Box 14350 - Portland OR 97293-0350 - Ph 971-673-0416

From: Jennings, Marie
Sent: Wednesday, November 7, 2018 2:20 PM
To: Duvil, Ricardi; Opalski, Dan
Subject: RE: Quick write-up on Warm Springs for Dan for weekly

Hi Dan

I entered the write-up below into the hot items weekly. Thanks Ricardi for your write-up.

The Warms Springs Tribal Drinking Water System Issues a Boil Water Notice

On November 4th, 2018, the utility operator of the Warm Springs Water system, a tribal drinking water system, informed EPA that the system lost pressure due to the main line breaking near the crossing river. When water mains lose pressure, it increases the chance that untreated water and harmful microbes will enter in the distribution system. EPA recommended that the system issue a boils water notice right away. We explained to the utility operator that the water is unsafe until the water system runs bacteriological test for total coliform and E. coli, along with chlorine residual levels throughout the distribution system to confirm the water is no longer a threat to public health. The notice was issued in the late afternoon on November 5, 2018. EPA will work closely with the system to determine when to lift the boil water notice.

From: Duvil, Ricardi <duvil.ricardi@epa.gov>
Sent: Wednesday, November 07, 2018 11:39 AM
To: Jennings, Marie <Jennings.Marie@epa.gov>
Subject: RE: Quick write-up on Warm Springs for Dan

Marie:

Please see below:

On Sunday morning , November 4th, 2018, Warm Springs Water system lost pressure due to main line break near the crossing river. When water mains lose pressure it increases the chance that untreated water and harmful microbes to enter in the distribution system. EPA was informed and we explained to the system that the water is unsafe until the water system runs bacteriological test for total coliform and E. coli, along with chlorine residual levels throughout the distribution system to confirm the water is no longer a threat to public health. That said, we recommended the system to issue a boil notice. Alyssa Macy (COO Tribes) and Travis Wells (General Manager) agreed with EPA's recommendation and they issued the boil notice on Monday, November 5th, late afternoon. EPA is working with the system closely to see when will be a good time to lift the boil water notice.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101

Phone: (206)-553-2578
Fax: (206)-553-1280

From: Jennings, Marie
Sent: Wednesday, November 07, 2018 10:56 AM
To: Duvil, Ricardi <duvil.ricardi@epa.gov>
Subject: Quick write-up on Warm Springs for Dan

Hi Ricardi

Can you pull together 2 to 4 sentences re: the Warm Springs Issue for Dan for the hot items weekly.

Thanks!

Marie J

From: Jennings, Marie
Sent: Wednesday, November 7, 2018 12:33 PM
To: Duvil, Ricardi
Subject: RE: Quick write-up on Warm Springs for Dan

Thanks Ricardi

From: Duvil, Ricardi <duvil.ricardi@epa.gov>
Sent: Wednesday, November 07, 2018 11:39 AM
To: Jennings, Marie <Jennings.Marie@epa.gov>
Subject: RE: Quick write-up on Warm Springs for Dan

Marie:

Please see below:

On Sunday morning , November 4th, 2018, Warm Springs Water system lost pressure due to main line break near the crossing river. When water mains lose pressure it increases the chance that untreated water and harmful microbes to enter in the distribution system. EPA was informed and we explained to the system that the water is unsafe until the water system runs bacteriological test for total coliform and E. coli, along with chlorine residual levels throughout the distribution system to confirm the water is no longer a threat to public health. That said, we recommended the system to issue a boil notice. Alyssa Macy (COO Tribes) and Travis Wells (General Manager) agreed with EPA's recommendation and they issued the boil notice on Monday, November 5th, late afternoon. EPA is working with the system closely to see when will be a good time to lift the boil water notice.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

From: Jennings, Marie
Sent: Wednesday, November 07, 2018 10:56 AM
To: Duvil, Ricardi <duvil.ricardi@epa.gov>
Subject: Quick write-up on Warm Springs for Dan

Hi Ricardi

Can you pull together 2 to 4 sentences re: the Warm Springs Issue for Dan for the hot items weekly.

Thanks!

From: Tucker, Michelle
To: Duvil, Ricardi
Subject: Warm Springs - Sidwalter (GW)
Date: Monday, November 19, 2018 2:17:54 PM
Attachments: 1 - Sidwalter CWS NOV & NOD Cover Letter.pdf
2 - Sidwalter CWS NOV 04-24-2018.pdf
2014 Sidwalter SS Report.pdf
1 - Sidwalter CWS NOD Letter.pdf
Sidwalter SS 4-2017 104101101.pdf

Not sure if you remember or not but I had a series of meetings with enforcement, data, and program folks to determine how we would deal with situations like this…items from a prior survey were never corrected nor issued a violation and we now have a new survey. You didn't attend all the meetings, just a few so I'm guessing it's just a vague memory at best.

In these instances, I've been issuing a violation for the uncorrected items from prior survey (NOV & SDWIS migrated violation) at the same time as the NOD for the new survey. I've done this on a few systems to date (possibly 3-4???)

At any rate, that's what I did for the Warm Springs Sidwalter system and thought you might want to see (of course upon rereading I found a two typos…grrrrr). Everything is on the G drive and rather easy to follow given the file structure I use. There are Word and Excel files for each of these PDFs (also on G) in case you want to cut/paste any of the stuff for your use. Remember as always that I designed it all for GW systems so all the citations, time frames, etc would need to be updated but still thought it might be useful for you to at least see how I handle this type of thing

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

April 24, 2018

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Travis Wells,
General Manager, Public Utilities Branch
Warm Springs Indian Reservation
PO Box C
Warm Springs, Oregon 97761

Re: Sidwalter Public Water System (PWS ID #104101101) Failure to Correct Significant Deficiencies Identified by the 2014 Sanitary Survey under the Ground Water Rule and 2017 Sanitary Survey Significant Deficiencies

Dear Mr. Wells:

The purpose of this letter is to inform you of the documents contained in this package. The first document is the Environmental Protection Agency's (EPA) Notice of Violation under the Ground Water Rule for failure to correct significant deficiencies from the April 24, 2014, sanitary survey. In this letter and enclosures are the details of the violation issued, necessary actions to return the water system to compliance, public notification requirements, a template, and certification form.

The second document is the EPA's Notice of Deficiencies under the Ground Water Rule. In this letter and enclosures are the details of the deficiencies identified during the April 25, 2017, sanitary survey, the specific significant deficiencies that must be addressed, documents that must be sent to EPA, and a copy of the sanitary survey upon which our notification letter was based.

If you have any questions about the documents contained in the package, please contact Michelle Tucker at tucker.michelle@epa.gov or (206) 553-1414. We appreciate your efforts to protect the health of the customers of your drinking water system.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Enclosures

cc: Mr. Laddie Folster,
Tribal Utility Consultant, Indian Health Services

Mr. Roy Spino
Water Manager,
Confederated Tribes of Warm Springs

Mr. Russell Graham,
Tribal Environmental Health,
Confederated Tribes of Warm Springs

Mr. Steve Courtney,
Operator, Sidwalter Community Water System

Mr. Jason Tohet,
Operator, Sidwalter Wastewater Treatment Plant

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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1200 Sixth Avenue, Suite 900
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OFFICE OF
WATER AND WATERSHEDS

April 24, 2018

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Travis Wells,
General Manager, Public Utilities Branch
Warm Springs Indian Reservation
PO Box C
Warm Springs, Oregon 97761

Re: Sidwalter Public Water System (PWS ID #104101101) failure to correct significant deficiencies identified by a sanitary survey under the Ground Water Rule

Dear Mr. Wells:

The purpose of this letter is to inform you that the Sidwalter Public Water System (the System) is currently in violation of the National Primary Drinking Water Regulations, specifically for failure to correct significant deficiencies under the Ground Water Rule (40 C.F.R. §141.403). The U.S. Indian Health Service, on behalf of the U.S. Environmental Protection Agency (EPA), conducted a sanitary survey on April 24, 2014. EPA notified the System of significant deficiencies on August 1, 2014. Accordingly, the owner and/or operator of the System had 120 days from the receipt of EPA's Notice of Deficiencies letter to address the significant deficiencies or submit a schedule to EPA for approval specifying how and by when the significant deficiencies would be addressed.

On November 7, 2014, EPA sent a letter reminding the system that a corrective action plan (CAP) was due by December 9, 2014. EPA received the System's request for an extension and on December 15, 2014, EPA approved a CAP for the System to address all significant deficiencies by the spring of 2015. Though some deficiencies were addressed, EPA has not received evidence that the three significant deficiencies shown below were corrected. Due to these outstanding deficiencies, the System is in violation of the Ground Water Rule. In order for the Sidwalter Public Water System to return to compliance, these remaining significant deficiencies must be corrected or placed on an approved schedule:

Uncorrected Significant Deficiencies	**Corrections to be Made**
Sidwalter Pump House – Sources – No finished sample tap	A sample tap must be provided on the well discharge pipe following treatment.
Sidwalter Well – Sources – Improper or missing well or spring vent	The well vent must be screened with the return bend facing downward and terminating 18-inches above ground level or above minimum flood level, whichever is higher.

Sidwalter Well – Sources – Unsealed electrical conduit at groundwater source	The conduits and junction boxes must be sealed to prevent contaminants from entering the well casing.

As a result of the violation, the Sidwalter Public Water System, as a community water system, must notify its customers of this violation within 30 days of receiving this letter and every three months afterwards until the deficiencies have been corrected. A Public Notice template, instructions, and certification are enclosed to assist you. You are also required to send a copy of the Public Notice, certification that it was issued, and an action plan to address these outstanding deficiencies to Ms. Michelle Tucker at tucker.michelle@epa.gov or:

Michelle Tucker
USEPA, Region 10 (OWW-193)
1200 Sixth Ave, Suite 155
Seattle, WA 98101

In addition to the Public Notice requirements, the water system must inform its customers of any significant deficiency that is uncorrected at the time of the next consumer confidence report. The System must continue to inform the public annually until EPA determines that the particular significant deficiency is corrected.

If you have any questions about this violation or how to return your water system to compliance, please contact Michelle Tucker at tucker.michelle@epa.gov or (206) 553-1414. We appreciate your efforts to protect the health of the customers of your drinking water system.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Enclosures

cc: Mr. Laddie Folster,
Tribal Utility Consultant, Indian Health Services

Mr. Roy Spino
Water Manager,
Confederated Tribes of Warm Springs

Mr. Russell Graham,
Tribal Environmental Health,
Confederated Tribes of Warm Springs

Mr. Steve Courtney,
Operator, Sidwalter Community Water System

Mr. Jason Tohet,
Operator, Sidwalter Wastewater Treatment Plant

Instructions for Ground Water Rule Failure to Take Corrective Action Within Required Time Frame Public Notice

Template on Reverse

A system's failure to take corrective action within the required timeframe to be in compliance with an EPA-approved corrective action plan or significant deficiency under the Ground Water Rule is a treatment technique violation and requires Tier 2 notification. You must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation [40 CFR 141.203(b)]. You must issue a repeat notice every three months for as long as the violation persists.

Community systems must use one of the following methods [40 CFR 141.203(c)]:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Noncommunity systems must use one of the following methods [40 CFR 141.203(c)]:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and noncommunity systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method [40 CFR 141.203(c)]. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on your system's letterhead if available.

The notice on the reverse is appropriate for mailing, posting, or hand delivery. If you modify this notice, you must still include all required Public Notice elements from 40 CFR 141.205(a) and leave the mandatory language unchanged (see below).

Mandatory Language

Mandatory language on health effects, which must be included as written (with blanks filled in), is presented in italics in each notice with an asterisk on either end.

You must also include the following italicized language in all notices, where applicable [40 CFR 141.205(d)]. Use of this language does not relieve you of your obligation to take steps reasonably calculated to notify all persons served:

> *Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with Ground Water Rule treatment technique violations. Depending on the corrective action you are taking, you can use one or more of the following statements, if appropriate, or develop your own text:

- Although we did not meet our deadline, we are now in consultation with EPA to develop a corrective action plan.
- The [source of contamination/significant deficiency] has been identified and addressed.
- We have implemented a short term plan to address the immediate issue while we pursue the long-term solution.

Repeat Notices

For repeat notices, you should state how long the violation has been ongoing and remind consumers of when you sent out any previous notices. If you are making progress with correcting the significant deficiency or addressing the fecal indicator-positive source sample, describe it. Alternatively, if funding or other issues are delaying corrective action, let consumers know.

After Issuing the Notice

Make sure to send your primacy agency a copy of each type of notice and a certification that you have met all public notification requirements within ten days after issuing the notice [40 CFR 141.31(d)].

Ground Water Rule Failure to Take Corrective Action Within Required Time Frame Public Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

[System] Failed to Correct a Significant Deficiency Within Required Time Frame.

Our water system recently violated a drinking water requirement. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

A routine inspection conducted on [give date] by the US Indian Health Service on behalf of the US Environmental Protection Agency (EPA) found [describe significant deficiency in our water system]

As required by EPA's Ground Water Rule, we were required to take action to [correct this deficiency]. However, we failed to take this action by the deadline established by EPA.

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.
- If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What does this mean?
This is not an emergency. If it had been, you would have been notified within 24 hours.

Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?
[Describe corrective action.] We anticipate resolving the problem within [estimated time frame] (or the problem was resolved on [give date]).

For more information, please contact [name of contact] at [phone number] or [mailing address].

> **Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.**

This notice is being sent to you by [system]. State Water System ID#: _____.
Date distributed: _____.

Public Notification Certification Form

The water system must complete this section. The signature below certifies that the notice contains all required elements.

Complete the following items (check all that apply):

☐ I mailed/delivered Public Notices to the water users within 30 days of receiving EPA's Notice of Violation for failure to correct significant deficiencies identified by a sanitary survey under the Ground Water Rule.

☐ (**For non-community systems ONLY**) Notice posted at _____ on ___ / ___ / ____ within 30 days of receiving EPA's Notice of Violation for failure to correct significant deficiencies identified by a sanitary survey under the Ground Water Rule.

All systems - Provide information of another method used to reach others if they would not be reached by the first method. Such methods could include newspapers, email, delivery to community organizations, etc.

_____

_____

_____ _____

Water System PWS ID

_____ _____ _____

Signature of owner or operator Position Date

Send a copy of the completed notice and this certification form to: tucker.michelle@epa.gov or US EPA R10 (OWW-193), 1200 Sixth Ave, Suite 155, Seattle WA 98101.

Corrective Action Plan

EPA Region 10

Tribal Public Water System Supervision Program

All public water systems are required to undergo sanitary surveys. Public water systems using groundwater water must consult about required corrective actions within 30 days of being notified of a significant deficiency and must complete corrective actions or be in compliance with an approved Corrective Action Plan within 120 days of receiving notice of significant deficiencies (40 CFR 141.403 (a)).

A proposed corrective action plan must provide a written description of **how** and **on what schedule/when** the following significant deficiencies will be/were addressed. Please fill in the table below and submit documentation of correction to the significant deficiencies below to Michelle Tucker at **tucker michelle@epa.gov**. Please submit photos, receipts, or other items documenting corrections that have been made (reference documentation with written statement in column B).

PWSID:	104101101
System Name:	Sidwalter CWS
Primary Source:	Groundwater
Sanitary Survey Date:	4/24/2014
Surveyor:	Tia Skerbeck
Notice Date:	8/1/104

Notice of Violation Date:	**4/24/2018**

Deficiency	**Schedule to Address Deficiency**		**Accomplishments (date completed)**
	Milestone/Corrective Action Description	**Scheduled Date**	
Sources - #4 A sample tap must be provided on the well discharge pipe following treatment.			
Sources - #6 The well vent must be screened with the return bend facing downward and terminating 18-inches above ground level or above minimum flood level, whichever is higher.			
Sources - #7 The conduits and junction boxes must be sealed to prevent contaminants from entering the well casing.			

Please list any additional attachments included with this plan:

I understand that failing to meet an EPA approved Deficiency Corrective Action Plan may constitute a violation of the Safe Drinking Water Act.

Name (print) address

Phone email

Signature Date

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	

EPA Use Only			
approved by (print)			closed date
	Compliance Officer Signature	Date	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

April 24, 2018

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Travis Wells,
General Manager, Public Utilities Branch
Warm Springs Indian Reservation
PO Box C
Warm Springs, Oregon 97761

Re: Sanitary Survey Significant Deficiencies at the Sidwalter Community Water System, PWS ID #104101101

Dear Mr. Wells:

Thank you for having your sanitary survey conducted by Indian Health Service's tribal utility consultant Laddie Folster on April 25, 2017. A Sanitary Survey is a comprehensive evaluation of the source, pumps and pumping facilities, treatment, storage, distribution, laboratory facilities, management and operator qualifications at a public water system, required under the National Primary Drinking Water Regulations (40 CFR Part 141). This letter is to inform you that significant deficiencies were identified at the Sidwalter Community Water System during the sanitary survey.

These significant deficiencies have the potential to impair your water quality and jeopardize public health. Significant deficiencies require immediate attention and must be corrected within 120 days from receipt of this letter. If you are not able to address significant deficiencies by this deadline, you must be on an approved corrective action plan. Failure to do so will result in a violation of the National Primary Drinking Water Regulations (40 CFR §141.403).

Due to the failure of the Sidwalter Water System to correct significant deficiencies from the prior sanitary survey, a violation has already been issued under the Ground Water Rule. Those significant deficiencies are reiterated here as they were still not corrected at the time of the most recent survey; the process for bringing the system back into compliance is detailed in the enclosed Notice of Violation letter. The remainder of this letter addresses actions the Santiago Water System must undertake in response to the newest sanitary survey conducted on May 23, 2017.

<u>Significant Deficiencies</u>: The following items must be corrected, or on an approved schedule to be corrected, within 120 days of receipt of this letter for ground water systems or another violation will be issued.

- #4 A sample tap is not provided on the well discharge pipe following treatment.
- #6 The well vent is not screened with the return bend facing downward and terminating 18-inches above ground level or above minimum flood level, whichever is higher.

- #7 Conduits and junction boxes are not sealed to prevent contaminants from entering the well casing.

Minor Deficiencies: The following items should be corrected prior to the next sanitary survey so that they do not become significant deficiencies in the future.

- #19 The well cannot be pumped to waste at the design capacity of the well via an approved air gap at a location prior to the first service connection.
- #20 Standby or auxiliary power is not available.
- #63 There is not a deluge shower and/or eye washing device installed where strong acids and/or alkalis are used or stored.
- #120 Valves are not periodically exercised.
- #121 Customer complaints and investigation reports are not kept.
- #124 There is not a routine main and dead-end water flushing program.
- #126 The operator is not trained in cross connection control.
- #146 There is not a separate drain line on the storage structure.
- #165 All non-sample taps installed in the pump house are not equipped with an appropriate backflow prevention device.
- #216 The Water System does not have a Wellhead Protection Program.
- #217 Consumer confidence reports are not sent to users each year.
- #218 The Water System does not have a current master plan.
- #219 The master plan does not include a water conservation plan.

Recommendations: The following items are best management practices shown to improve drinking water systems; addressing these items is voluntary.

- #27 Well house buildings are not being maintained to provide protection from rodent infestation.
- #129 There is not a leak detection program.
- #130 All services are not metered and/or meters routinely read.
- #147 There is no water-sampling tap provided at the storage structure outlet.
- #175 There is no water pressure relief valve installed where the pump is directly connected to the distribution system.
- #225 A capacity assessment has not been completed.
- #228 The Water System does not have emergency power.

The Ground Water Rule requires systems to consult within 30 days of receiving a notice of a significant deficiency. Significant deficiencies require immediate attention and must be corrected within 120 days from receipt of this letter. If you are not able to address significant deficiencies by this deadline, you must be on an approved corrective action plan. Documentation of significant deficiency corrections made, and/or a schedule of the dates and actions of future corrections, must be submitted to tucker.michelle@epa.gov within the 120 day deadline or violations will be issued.

If you have any questions or would like to address the findings of the sanitary survey, please feel free to contact me at tucker.michelle@epa.gov or (206) 553-1414. We would like thank you and

your staff for their cooperation and time on the survey as well as assistance in addressing these findings.

Sincerely,

Michelle Tucker

Michelle Tucker
Ground Water Rule Manager

Enclosures

cc: Mr. Laddie Folster,
Tribal Utility Consultant, Indian Health Services

Mr. Roy Spino
Water Manager,
Confederated Tribes of Warm Springs

Mr. Russell Graham,
Tribal Environmental Health,
Confederated Tribes of Warm Springs

Mr. Steve Courtney,
Operator, Sidwalter Community Water System

Mr. Jason Tohet,
Operator, Sidwalter Wastewater Treatment Plant

Corrective Action Plan

EPA Region 10

Tribal Public Water System Supervision Program

All public water systems are required to undergo sanitary surveys. Public water systems using groundwater water must consult about required corrective actions within 30 days of being notified of a significant deficiency and must complete corrective actions or be in compliance with an approved Corrective Action Plan within 120 days of receiving notice of significant deficiencies (40 CFR 141.403 (a)).

A proposed corrective action plan must provide a written description of **how** and **on what schedule/when** the following significant deficiencies will be/were addressed. Please fill in the table below and submit this proposed corrective action plan within 120 days to Michelle Tucker at **tucker michelle@epa.gov**. Please submit photos, receipts, or other items documenting corrections that have already been made (reference documentation with written statement in column B).

PWSID:	104101101
System Name:	Sidwalter CWS
Primary Source:	Groundwater
Sanitary Survey Date:	4/25/2017
Surveyor:	Laddie Folster
Notice Date:	4/24/2018

Corrective Action Plan Due Date:	**8/22/2018**

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	
Sources - #4 Is there a sample tap provided on the well discharge pipe following treatment			
Sources - #6 Is well vent screened with the return bend facing downward and terminating 18-inches above ground level or above minimum flood level, whichever is higher			
Sources - #7 Are conduits and junction boxes sealed to prevent contaminants from entering the well casing			

Please list any additional attachments included with this plan:

I understand that failing to meet an EPA approved Deficiency Corrective Action Plan may constitute a violation of the Safe Drinking Water Act.

Name (print) address

Phone email

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	

Signature Date

EPA Use Only		
approved by (print)		closed date
	Compliance Officer Signature	Date

DEPARTMENT OF HEALTH & HUMAN SERVICES PUBLIC HEALTH SERVICE

Indian Health Service
Portland Area Office
1414 NW Northup St, Suite 800
Portland, OR 97209

09 May 2014

Don Courtney
Public Works General Manager
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, OR 97731

Dear Mr. Courtney:

Thank you for the time of your operator to complete the site visit of the Sidwalter community water system (PWSID: 1041011101). The assessment of the water systems is a tool for identifying areas requiring improvement, and maintenance. Enclosed is the water system sanitary survey report conducted on April 24, 2014 and is a snapshot of the systems on that day.

Significant Deficiencies and Recommendations

1. Page 2 of 8, *item 1*
The well is in need of a sanitary cap equipped with a vent and a proper seal (see figure 1). Installation of a sanitary well cap with a rubber seal and vermin barrier will ensure public health is protected by providing a barrier to contamination and water intrusion into the well.

Figure 1

2. Page 2 of 8, *item 4*
   There is no post-treatment sample tap available (see figure 2). Installation of a post-treatment sample tap will allow for measurement of disinfection levels prior to distribution to the system and will help operators ensure proper levels of disinfectant are being dosed.

Figure 2

3. Page 2 of 8, *item 6*
   The well vent is not sealed, screened, and turned down (see figure 3). Installation of a vent that is sealed, screened, and turned down ensures public health is protected by providing a barrier to pests and water intrusion into the well and water supply.

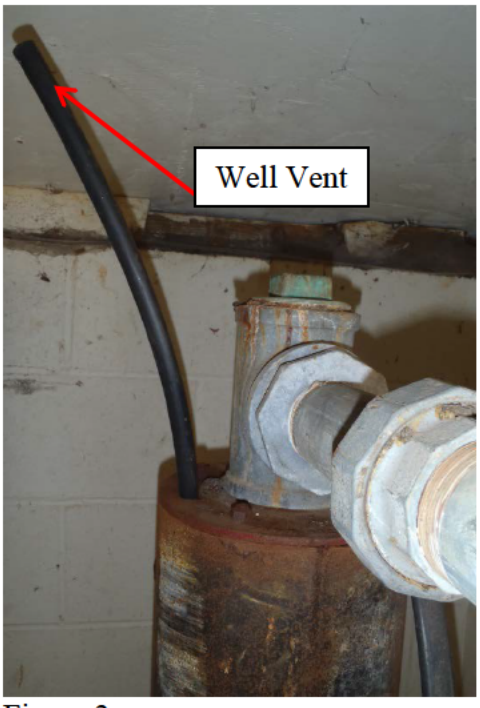


Figure 3

4. Page 2 of 8, *item 7*
   The wiring leading into the well in not encased in conduit or sealed to the well cap (see figure 4). Providing a seal and proper conduit will ensure the well and water supply remain free from contamination.

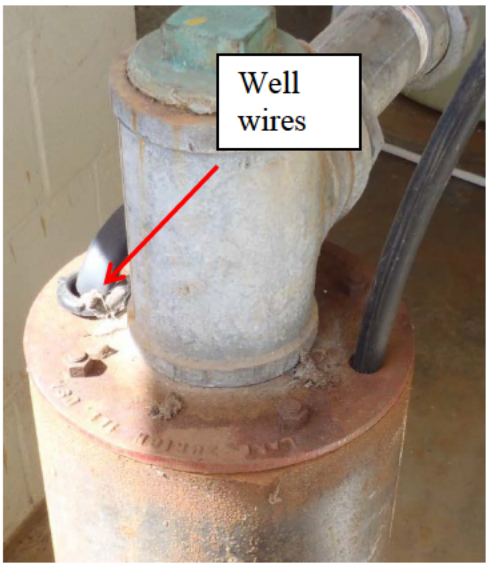


Figure 4

5. Page 7 of 8, item 235
   The system lacks a pressure relief valve or surge arrestor in the pumphouse. The system experiences a water hammer and flow back through the water meter (figure 5). A water hammer poses a threat to the safety of the operator and structural integrity of the water system. Installation of a pressure relief valve or surge arrestor to absorb the water hammer will ensure the safety of the operator and integrity of the system are maintained.


Figure 5

Minor Deficiencies and Recommendations

6. Page 2 of 8, *item 19*
   The well cannot be pumped to waste at capacity at a location prior to the first connection. Design that allows pumping to waste is recommended for collection of source water and investigative samples.

7. Page 2 of 8, *item 20*
   Standby or auxiliary power are not available. The addition of auxiliary power ensures a safe supply of water remains sufficient during times of emergency or power failure.

8. Page 3 of 8, *item 57*
   The chemical feeders are not flow paced. Controlling of chemical feeders through a flow-sensing device ensures an accurate injection of chemicals into the system based on the flow of water from the well. Currently the system is arranged so that the well pump provides a constant amount of flow, which the chemical feed pumps is adjusted to.

9. Page 3 of 8, *item 63*
   The system is lacking an eye-washing device. Installation of an eye-washing device or portable eye-washing bottles is an important safety measure to ensure employee health and safety is maintained.

10. Page 4 of 8, *item 122*
    The system does not have a program in place for regular exercise of valves. Regular exercise of valves ensures proper operation and helps identify areas in need of repair and maintenance.

11. Page 5 of 8, *item 146*
    The gate to the storage tank area is locked from unauthorized entry, however the ladder to the tank is unsecured. Ensuring security on the tank ladder is maintained precludes unauthorized access to the storage tank, and ensures the structure remains free from vandalism and contamination.

12. Page 7 of 8, *item 218*
    There is no current wellhead protection program in place. Establishment of a well head protection program will ensure the highest quality of water is maintained by preventing contaminants from reaching drinking water sources.

The water system received violations for consumer confidence reports (CCR) in 2011, 2012, and 2013. These reports were not received by EPA before the July 1st annual deadline. These violations have since been returned to compliance status. To prevent future violations, ensure CCRs are sent to system customers and EPA annually by July 1st, and the CCR certification form is sent to the EPA no later than October 1 annually.

Feel free to call me at (503)-414-7786 with any questions, comments, or concerns regarding the assessment details. A copy of this report will be sent to Region X Federal Environmental Protection Agency (EPA) Drinking Water Program, and any remarks received from the Confederated Tribes of Warm Springs will be forwarded to the EPA.

Sincerely,

Tia Skerbeck
Indian Health Service
Tribal Utility Consultant

Enclosure

Cc: Roy Spino, Water/Wastewater Engineer, Confederated Tribes of Warm Springs
Lisa Jacobsen, Tribal Drinking Water Coordinator, Environmental Protection Agency
Steve Anderson, District Utility Consultant, Indian Health Service
Matt Rasmusson, District Engineer, Indian Health Service
Jason Davis, Environmental Engineer, Indian Health Service
Nancy Collins, Environmental Health Officer, Indian Health Service

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SITE VISIT INFORMATION

SURVEY DATE: 0 4 2 4 2 0 1 4 | PWS ID: 1 0 4 1 0 1 1 0 1

Sanitary Survey includes: (1) Water Sources: Ground ☑ Surface ☐ (2) Well Water Treatment: Part A ☑ Part B ☐ (3) Distribution ☑ (4) Finished Water Storage ☑
(Check all that applies) (5) Pumps, Pump Facilities and Controls ☑ (6) Monitoring ☑ (7) Management/Operation Capacity ☑ (8) Operator Compliance ☑ (9) Other ☐

Date of last survey	System Type: Federal Government ☐ State Government ☑ Local ☐ Mixed (Public/Private) ☐	District
05/04/2014	Private ☐ Native American Government ☑ Other ☐	Southern Cascade

# of Residential Connections	# of Non-Residential Connections	# of Population	# of Storage Facilities	# of Ground Source	# of Surface water Source
36	1	~120-135	1	1	N/A

Name of Water Supply	Water Purchased From: Name N/A PWS	Combined Sources: YES ☐ NO ☒
Sidwalter CWS	Water Sold To: Name PWS	Type: Well field ☒ Lake ☐ River/stream ☐ Infiltration Gallery ☐ Other ☐

Address	Owner Name: Confederated Tribes of Warm Springs
Mailing Address	Owner Address: 1233 Veterans St
City, State and Zip Code / Telephone	City, State and Zip Code: Warm Springs, OR 97761 / Telephone: 541-553-1161
Plant Location (if different than mailing address)	• WERE STRUCTURAL DEFICIENCIES NOTED DURING THIS SURVEY: YES ☐ NO ☐ IF YES, SEE PAGE(S) ____ OF ____
System Manager's Last Name: Spino	Individual present during inspection:
System Manager's First Name: Roy	Name: Tia Skerbeck Title: TUC
System Manager's Address: P.O. Box C/Water Engineer	Name: Jason Davis Title: IHS Engineer
System Manager's City: Warm Springs	Name: Nancy Collins Title: Sanitarian, IHS
System Manager's State: OR	Name: ~~Roy Spino~~ Steven Govenor Title: ~~Water manager~~ CEDM
System Manager's Telephone Number: 541-553-2324	Water System Classification Service Category: Community Water System ☑ Non-transient Non-community ☐ Transient Non-community ☐
	Surveyors Agency: Indian Health Service

Comments:

Surveyed by / Date	Received by / Date
Tia Skerbeck 4/24/2014	S. Govenor 4.24.14

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE: 04/24/2014 | PWS ID: 1041011101

1. GROUNDWATER SOURCES

Source Name: Sidwalter/Well	Status: Active ☑ Inactive ☐ Proposed ☐ Emergency ☐	Source Type: Ground water non-purchased ☑ Ground water purchased ☐	
Physical Address: no formal address avail	Seasonal Operation Dates Start End	Water Purchased from: N/A	Water Sold to: N/A
Treatment Objective: Disinfection		Treatment Methods: Sodium hypochlorite	
Has well-log been submitted to EPA? YES ☐ NO ☐ UNKNOWN ☑			
Well / Spring Yield (GPM)	Pump Capacity (GPM)	Design Daily Production (GPD): 20,000	
Casing Size (In): 8inch	Casing Depth (Ft): 437	Interval Screen Depth (Ft): 218-504, 350-400, 400-437	Grout Dept (Ft): 25 / Date Drilled: 1985
LAT +/-: 44.88369	LONG +/-: -121.48658	Meridian	Township: 8S / Range: 10E / Section: 12 SE / Quarter/Quarter
Nature of Recharge Area: Confined ☐ Unconfined ☑ Unknown ☐	Formation/Rock Type: Sandstone/broken lava	Is there a Well Head Protection Plan of this area? YES ☐ NO ☑ UNKNOWN ☐	If yes, is this for all water sources? YES ☐ NO ☑ UNKNOWN ☐
Source of Potential Pollution: N/A	Are static and pumping water levels measured regularly? YES ☐ NO ☑ UNKNOWN ☐	Are chemical contaminants source in sanitary control area? YES ☐ NO ☑ UNKNOWN ☐	

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
☐	☒	☐	☐	1.	Is the well provided with a sanitary cap, vent and seal that are properly installed?
☒	☐	☐	☐	2.	Does the casing extend a min. of 18 inches above the final ground surface and/or 12 inches above the pump house floor or slab?
☒	☐	☐	☐	3.	Is there a sample tap provided on the well discharge pipe prior to treatment? Smooth ☐ Threaded ☒
☐	☒	☐	☐	4.	Is there a sample tap provided on the well discharge pipe following treatment? Smooth ☐ Threaded ☐
☒	☐	☐	☐	5.	Is the well cased and grout sealed at least 20 feet or in such a manner that surface water cannot enter the well?
☐	☒	☐	☐	6.	Is well vent screened with the return bend facing downward and terminating 18 inches above ground level or above maximum flood level, whichever is higher?
☐	☒	☐	☐	7.	Are conduits and junction boxes sealed to prevent contaminants from entering the well casing?
☒	☐	☐	☐	8.	Is the source metered?

HAVE THE FOLLOWING MIN SET-BACK FROM THE PWS WELL BEEN MET?

☐	☐	☒	☐	9.	Gravity sewer line (100 ft)
☐	☐	☒	☐	10.	Pressure sewer line (100 ft)
☐	☐	☒	☐	11.	Individual home septic tank (100 ft)
☐	☐	☒	☐	12.	Individual home disposal field (100 ft)
☐	☐	☒	☐	13.	Livestock (100 ft)
☐	☐	☒	☐	14.	Individual home seepage pit (100 ft)
☐	☐	☒	☐	15.	Has a GWUDI determination been done for this source? If yes, is it filtered ☐ or unfiltered ☐

MINOR DEFICIENCY

YES	NO	NA	UNK		
☒	☐	☐	☐	16.	Are pressure tanks, check valves, blow-off valves, water meters, etc., maintained and operating properly?
☒	☐	☐	☐	17.	Is well site properly drained and protected from unauthorized entry?
☒	☐	☐	☐	18.	Is well site protected against flooding?
☐	☒	☐	☐	19.	Can the well be pumped to waste at the design capacity of the well via an approved air gap at a location prior to the first service connection?
☐	☒	☐	☐	20.	Is standby or auxiliary power available?
☒	☐	☐	☐	21.	Is a pressure gauge or other means of measuring water level provided at the installation and is it maintained and working properly?

RECOMMENDATION

☐	☐	☐	☒	22.	Has there been a source water assessment conducted for this source?

ARE WELL HOUSE BUILDINGS CONSTRUCTED OR MAINTAINED TO PROVIDE:

☒	☐	☐	☐	23.	Lighting
☒	☐	☐	☐	24.	Venting
☒	☐	☐	☐	25.	No storage of toxic/hazard chemical.
☒	☐	☐	☐	26.	Locked to prevent unauthorized entry.
☒	☐	☐	☐	27.	Protection from rodent infestation.

Surveyed by / Date	Received by / Date	Comments:
Tia Skerbeck 4/24/2014		

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE 0 4 2 4 2 0 1 4 PWS ID 1 0 4 1 0 1 1 0 1

2. WELL WATER TREATMENT PART A

Source treated by station	Physical Address	Lat-Long	Date Online	Daily Output	Schematic of plant readily available and up-to-date
Sidwalter	No formal address				YES ☑ NO ☐

Check all disinfection type used:
Gas ☐ Sodium hypochlorite (12 ½ %) ☑ Calcium hypochlorite ☐ Bleach (5 ¼ %) ☐
Ozone ☐ UV light ☐ Chlorine dioxide ☐ Other ☐

Source treated by station	Physical Address	Lat-Long	Date Online	Daily Output	Schematic of plant readily available and up-to-date
					YES ☑ NO ☐

Check all disinfection type used:
Gas ☐ Sodium hypochlorite (12 ½ %) ☐ Calcium hypochlorite ☐ Bleach (5 ¼ %) ☐
Ozone ☐ UV light ☐ Chlorine dioxide ☐ Other ☐

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
☒	☐	☐	☐	53.	Is the building in good structural condition?
☒	☐	☐	☐	54.	Is the building orderly and clean?
☒	☐	☐	☐	55.	Are chemical shipping containers fully labeled to include chemical name, purity, concentration, etc., and ANSI/NSF certification?

MINOR DEFICIENCY

☒	☐	☐	☐	56.	Are critical spare parts on hand?
☐	☒	☐	☐	57.	Are the feeders flow paced?
☒	☐	☐	☐	58.	Are chemical solution tanks kept covered?
☒	☐	☐	☐	59.	Is there an adequate quantity of disinfection on hand?
☐	☒	☒	☐	60.	Is there a flow meter in order to determine chemical feed rate?
☒	☐	☐	☐	61.	Are backup chemical feed pumps available and operational?
☒	☐	☐	☐	62.	Is the operator trained to use and conduct monitoring of disinfectant properly?
☐	☒	☐	☐	63.	Is a deluge shower and/or eye washing device installed where strong acids and/or alkalis are used or stored?
☒	☐	☐	☐	64.	Are chemical feed pumps controlled by a flow sensing device so that injection of the chemicals will not continue when flow of the water stops?
☒	☐	☐	☐	65.	Are cross connection controls provided so the liquid chemical solutions cannot be siphoned through the solution feeders into the water supply? Sweep 4mi valve
☒	☐	☐	☐	66.	PPE equipment – are at least one pair of rubber gloves, a dust respirator of a type certified by NIOSH for toxic dusts, an apron or other protective clothing and goggles or face mask provided for each operator?

RECOMMENDATION

☒	☐	☐	☐	67.	Is the chemical feed equipment readily accessible for servicing, repair and observation of operation?
☐	☒	☐	☐	68.	Have any changes been made to this treatment facility since the last survey?
☐	☐	☒	☐	69.	When more than one (1) chemical is stored or handled, are tanks and pipelines clearly labeled to identify the chemical they contain?
☒	☐	☐	☐	70.	Are the feeder(s) controlled manually?
☐	☒	☐	☐	71.	Have there been any interruptions in disinfection in the past year?

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
☐	☐	☐	☐	72.	Is the building in good structural condition?
☐	☐	☐	☐	73.	Is the building orderly and clean?
☐	☐	☐	☐	74.	Are chemical shipping containers fully labeled to include chemical name, purity, concentration, etc., and ANSI/NSF certification?

MINOR DEFICIENCY

☐	☐	☐	☐	75.	Are critical spare parts on hand?
☐	☐	☐	☐	76.	Are the feeders flow paced?
☐	☐	☐	☐	77.	Are chemical solution tanks kept covered?
☐	☐	☐	☐	78.	Is there an adequate quantity of disinfection on hand?
☐	☐	☐	☐	79.	Is there a flow meter in order to determine chemical feed rate?
☐	☐	☐	☐	80.	Are backup chemical feed pumps available and operational?
☐	☐	☐	☐	81.	Is the operator trained to use and conduct monitoring of disinfectant properly?
☐	☐	☐	☐	82.	Is a deluge shower and/or eye washing device installed where strong acids and/or alkalis are used or stored?
☐	☐	☐	☐	83.	Are chemical feed pumps controlled by a flow sensing device so that injection of the chemicals will not continue when flow of the water stops?
☐	☐	☐	☐	84.	Are cross connection controls provided so the liquid chemical solutions cannot be siphoned through the solution feeders into the water supply?
☐	☐	☐	☐	85.	PPE equipment – are at least one pair of rubber gloves, a dust respirator of a type certified by NIOSH for toxic dusts, an apron or other protective clothing and goggles or face mask provided for each operator?

RECOMMENDATION

☐	☐	☐	☐	86.	Is the chemical feed equipment readily accessible for servicing, repair and observation of operation?
☐	☐	☐	☐	87.	Have any changes been made to this treatment facility since the last survey?
☐	☐	☐	☐	88.	When more than one (1) chemical is stored or handled, are tanks and pipelines clearly labeled to identify the chemical they contain?
☐	☐	☐	☐	89.	Are the feeder(s) controlled manually?
☐	☐	☐	☐	90.	Have there been any interruptions in disinfection in the past year?

Surveyed by	Date	Received by	Date	Comments:
Tia Skerbeck	4/24/2014			Electrical junction box missing cover in pumphouse

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE: 0 4 2 4 2 0 1 4 | PWS ID: 1 0 4 1 0 1 1 0 1

3. DISTRIBUTION

What type of material are the pipe(s):	PVC ☑	AC ☐	PE ☑	CI/DI ☐

Distribution lines (Diameter and type)	Service Lines (Diameter and type)
1. 4" PVC	1. 1" HDPE
2.	2.
How many services are metered: 36 out of 36	Number of Fire Hydrants (types if known): 1. 2
	2.

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
☒	☒	☐	☐	112.	Are there hydrants or adequate blow-offs to flush all dead-end on the system?
☒	☐	☐	☐	113.	Are disinfectant residual measurements being made and recorded at the entry point and the distribution system?
☒	☐	☐	☐	114.	Is there a disinfectant residual of at least 0.2 mg/l at the entry point to the dist system?
☒	☐	☐	☐	115.	Is detectable free chlorine residual being maintained throughout the distribution system?
☒	☐	☐	☐	116.	Are proper residual test kits available and well stocked with reagents (DPD)?
☒	☐	☐	☐	117.	Is the PWS able to maintain a minimum pressure of twenty (20) psi throughout the distribution system (including fire flow)?
☐	☐	☒	☐	118.	Is the system protected from obvious cross connection observed during the survey?
☐	☐	☒	☐	119.	Is there a requirement for annual testing of the installed backflow prevention devices?
☒	☐	☐	☐	120.	Is there sufficient contact time between the disinfection point and first point in use?

MINOR DEFICIENCY

YES	NO	NA	UNK		
☒	☐	☐	☐	121.	Are accurate O&M records being maintained (check records)?
☐	☒	☐	☐	122.	Are valves periodically exercised?
☐	☒	☐	☐	123.	Are customer complaints and investigation reports kept?
☐	☐	☐	☒	124.	Are all automatic air relief valves equipped with a means of backflow protection?
☐	☐	☒	☐	125.	Are ARV's turned down, screened and protected from cross connection?
☐	☒	☐	☐	126.	Is there a routine main and dead-end water flushing program?
☐	☐	☒	☐	127.	Are backflow prevention devices installed at all appropriate locations?
☐	☒	☐	☐	128.	Is the operator trained in cross connection control?
☒	☐	☐	☐	129.	Are proper procedures followed for disinfection of new construction or repairs?

RECOMMENDATION

☒	☐	☐	☐	130.	Is there an inspection of new construction as well as follow-up inspections?
☐	☒	☐	☐	131.	Is there a leak detection program?
☐	☒	☐	☐	132.	Are all service metered and are meters routinely read?
☐	☒	☐	☐	133.	Was asbestos/cement pipe used in the system?

Comments:

Surveyed by	Date	Received by	Date
Tia Skerbeck	4/24/2014		

44.68823 -lat
121.48745 -long

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE 0 4 2 4 2 0 1 4 PWS ID 1 0 4 1 0 1 1 0 1

4. FINISHED WATER STORAGE

Total Storage Capacity (gals) 209,000 gal

Storage structure name Sidwalter	Physical location of storage structure	
Type of corrosion control Cathodic	Storage type Stand pipe	
Date in service:	Type of material: Bolted steel	Volume (gal): 209,000
Total days of supply ~3	Date last: Cleaned	Inspected

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
X	☐	☐	☐	134.	Is treated water storage covered or enclosed?
X	☐	☐	☐	135.	Is the storage structure clean and free from contamination?
X	☐	☐	☐	136.	Is the storage structure structurally sound?
X	☐	☐	☐	137.	Is the storage structure safely accessible to inspector?
X	☐	☐	☐	138.	Is an overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve?
☐	☐	☐	X	139.	Are access manhole openings for the storage structure 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked?
X	☐	☐	☐	140.	Are overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface?

MINOR DEFICIENCY

☐	X	☐	☐	141.	Is leakage evident at time of inspection?
☐	☐	☐	X	142.	Is the storage structure interior coating or liner peeling or cracked?
X	☐	☐	☐	143.	Can the storage structure be isolated from the system for repairs or cleaning?
X	☐	☐	☐	144.	Is the storage structure protected against flooding?
☐	☐	☐	X	145.	Do all vents open downward and are they fitted with a 4 mesh non-corrodible screen?
X	X	☐	☐	146.	Is the storage structure secured from unauthorized access?
X	☐	☐	☐	147.	Does the overflow have a splash pad?
☐	X	☐	☐	148.	Is there a separate drain line on the storage structure?

RECOMMENDATION

☐	X	☐	☐	149.	Is there a water-sampling tap provided at the storage structure outlet?
≦1 yr ☐	2-4 yrs ☐	5-10 yrs ☐	Never X	150.	When was the storage structure inspected last?
≦1 yr ☐	2-4 yrs ☐	5-10 yrs ☐	Never X	151.	How often is the storage structure cleaned?
X	☐	☐	☐	152.	Is storage structure lined? Line Type?

Pressure tank name	Physical location of storage structure	
Type of hydropneumatic system:	Non-Bladder ☐	Bladder ☐
Date in service:	Type of material	Volume (gal)
Total design capacity	Date last: Cleaned	Inspected

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
					HYDROPNEUMATIC SYSTEM
☐	☐	☐	☐	153.	Can the hydropneumatic tank(s) be isolated from the system, permitting operation of the systems?
☐	☐	☐	☐	154.	Is the tank(s) located above normal ground surface and completely housed?
☐	☐	☐	☐	155.	Do the tank(s) maintain adequate distribution system pressure?
☐	☐	☐	☐	156.	Is there a pressure gauge and pressure operated start-stop control?
☐	☐	☐	☐	157.	Is the pressure tank being inspected?

MINOR DEFICIENCY

					BLADDER AND NON-BLADDER
☐	☐	☐	☐	158.	Can the tank(s) be isolated with a shut-off valve for repairs or replacement?
					NON-BLADDER
☐	☐	☐	☐	159.	Is there an oil-less air compressor in service for the hydro pneumatic pressure tank?
☐	☐	☐	☐	160.	Has the non-bladder pressure tank(s) been tested for structural integrity in the past 5 years?
☐	☐			161.	Do all non-bladder hydro pneumatic tank(s) have the following?

If YES, which one: Water sight glass ☐ A drain ☐
Means to add air ☑ Automatic or manual air blow-off ☐
An access manhole (24 inches diameter where practical) ☐

RECOMMENDATION

☐	☐	☐	☐	162.	Are the interior and/or exterior surfaces in good condition?
☐	☐	☐	☐	163.	Is there a drain line on each tank?

What is the make and model of the tanks?

Number and tank(s) in gallon

Surveyed by	Date	Received by	Date	Comments:
Tia Skerbeck	4/24/2014			

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE: 0 4 2 4 2 0 1 4 | PWS ID: 1 0 4 1 0 1 1 0 1

6. MONITORING

Name of Water Supply: Sidwalter CWS

Tribe: Confederated Tribes of Warm Springs

SIGNIFICANT DEFICIENCY

Is the system in monitoring compliance for the following parameters:

AT THE ENTRY POINT

YES	NO	NA	UNK		
X	☐	☐	☐	**182.**	Nitrate
X	☐	☐	☐	**183.**	Inorganics (including nitrates)
X	☐	☐	☐	**184.**	Gross Alpha Screen & Uranium
X	☐	☐	☐	**185.**	VOC
X	☐	☐	☐	**186.**	SOC
X	☐	☐	☐	**187.**	Arsenic
☐	☐	X	☐	**188.**	CT Value (for systems avoiding filtration)
☐	☐	X	☐	**189.**	Turbidity
☐	☐	X	☐	**190.**	Fluoride
☐	☐	X	☐	**191.**	Bromate ozone?
X	☐	☐	☐	**192.**	Radium 228/226

IN THE DISTRIBUTION

X	☐	☐	☐	**193.**	Coliform
X	☐	☐	☐	**194.**	Lead & Copper (# of sites) 5
☐	☐	X	☐	**195.**	Asbestos
X	☐	☐	☐	**196.**	TTHM
X	☐	☐	☐	**197.**	HAA5s
X	☐	☐	☐	**198.**	Maximum Residual Disinfectant level
☐	☐	X	☐	**199.**	Are copies of public notices available?
X	☐	☐	☐	**200.**	Is all required monitoring current?
X	☐	☐	☐	**201.**	Are TTHM samples taken at location of maximum residence time?
X	☐	☐	☐	**202.**	Are HAA5 samples taken at location of maximum residence time?

MINOR DEFICIENCY

Are the following records maintained on-site or location nearby?

YES	NO	NA	UNK		
X	☐	☐	☐	**203.**	Bacteriological Analysis
X	☐	☐	☐	**204.**	Chemical Analysis
☐	☐	☐	X	**205.**	Violation records
X	☐	☐	☐	**206.**	Copies of past sanitary survey
☐	☐	☐	X	**207.**	Reports of variance or exemption
☐	☐	☐	X	**208.**	Copies of public notices
X	☐	☐	☐	**209.**	Daily free chlorine residuals
X	☐	☐	☐	**210.**	Are daily free/total chlorine residual taken?

Comments:

Surveyed by	Date	Received by	Date
Tia Skerbeck	4/24/2014		

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE: 0 4 2 4 2 0 1 4

PWS ID: 1 0 4 1 0 1 1 0 1

7. MANAGEMENT/OPERATION CAPACITY

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
X	☐			211.	Is the Manager certified at appropriate level?
X	☐			212.	Does the Water System have an operation and maintenance manual?
X	☐			213.	Does the system have written standard operating protocol for other operators?
X	☐			214.	Does the water system have an emergency response plan?
X	☐	☐	☐	215.	Does the Water System have Cross-Connection Control Program?

MINOR DEFICIENCY

X	X CCR	☐	☐	216.	Is the Water System in compliance? ~~CCR violations~~
☐	X	☐	☐	217.	Does the system have more than 4 violations in the past two years
☐	X	☐	☐	218.	Does the Water System have a Wellhead Protection Program?
☐	X	☐	☐	219.	Are consumer confidence report sent to user each year?
☐	X	☐	☐	220.	Does the Water System have a current mater plan?
☐	X	☐	☐	221.	Does the mater plan include a water conservation plan?
☐	☐	X	☐	222.	What year was the master plan completed? 19____ 20____
X	☐	☐	☐	223.	Is there a written Water Quality Monitoring site plan/program available for review?

RECOMMENDATION

X	☐	☐	☐	224.	Does the Water System have an Operating Budget?
X	☐	☐	☐	225.	Does the Water System have a service area and facility map?
X	☐	☐	☐	226.	Does the Water System have a water facilities inventory?
☐	X	☐	☐	227.	Has a capacity assessment been completed?
X	☐	☐	☐	228.	Does the PWS have a governing body or board of directors? (city)
X	☐	☐	☐	229.	Is there a clear plan of organization and control among the people responsible for management and operation of the Water System?
☐	X	☐	☐	230.	Does the Water System have emergency power? ☐ Generator, automatic switchover ☐ Transfer switch only ☐ Generator, manual switchover ☐ Other ☐ Portable with transfer switch
☐	☐	X	☐	231.	Frequency of testing generator: ☐ Monthly ☐ Quarterly ☐ Annually ☐ Infrequently ☐ Never

8. OPERATOR COMPLIANCE

SIGNIFICANT DEFICIENCY

232. Operator Qualification or Certification

Operator(s) Name	Cert. by	Cert. No.	Cert. Level	Meets System Requirements	Date Issued	Date Expires
Roy Spino	OR		Dist 1	Yes		2014
Steven Traversa	OR		comm	yes		2014

YES	NO	NA	UNK		
X	☐	☐	☐	233.	Are Operators certified at the appropriate level?

MINOR DEFICIENCY

X	☐	☐	☐	234.	Is a properly certified operator available at all times?

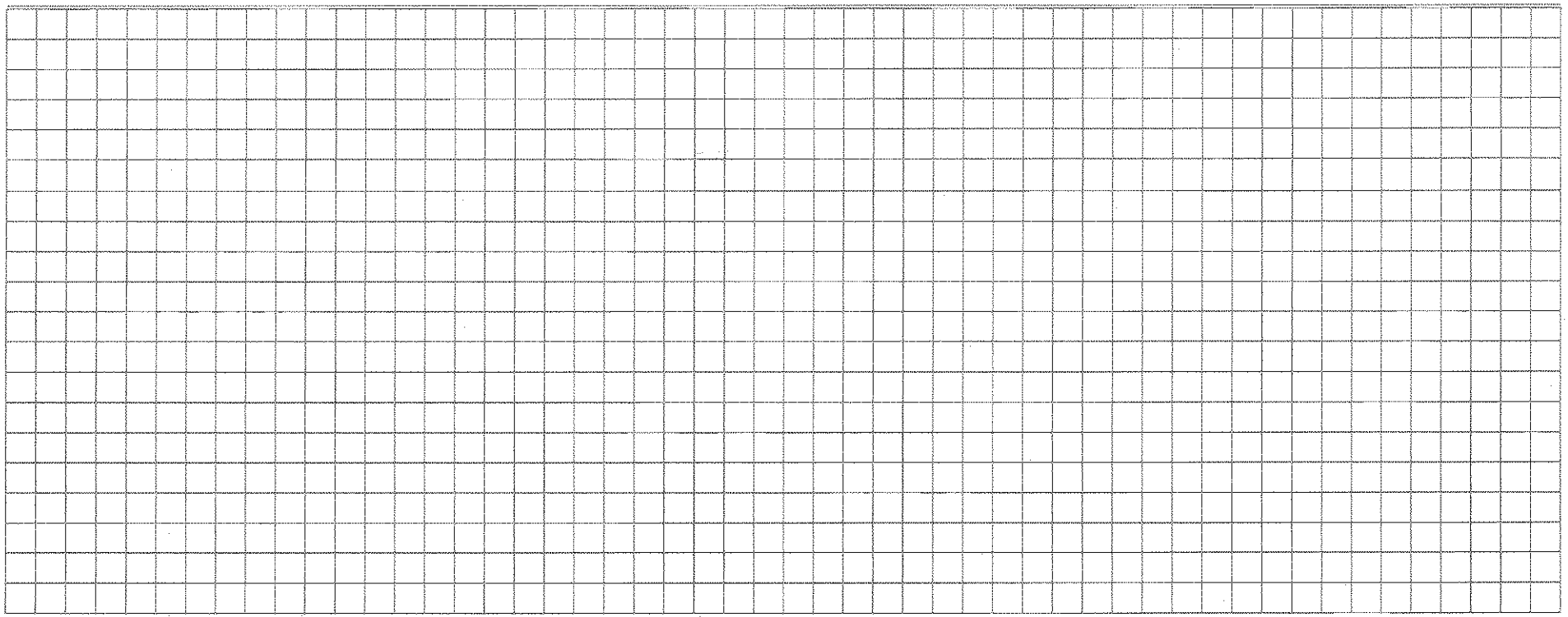
9. OTHER

SIGNIFICANT DEFICIENCY

YES	NO	NA	UNK		
X	☐	☐	☐	235.	System lacks Pressure Relief valve and experiences severe water hammer in pumphouse.
☐	☐	☐	☐	236.	
☐	☐	☐	☐	237.	
☐	☐	☐	☐	238.	
☐	☐	☐	☐	239.	
☐	☐	☐	☐	240.	

Surveyed by	Date	Received by	Date	Comments:
Tia Skerbeck	4/24/2014			214. CCR violations for 2011, 2012, 2013

Comments and Maps



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DEPARTMENT OF HEALTH & HUMAN SERVICES
PUBLIC HEALTH SERVICE

Indian Health Service
Spokane District Office
528 E Spokane Falls Blvd., Ste 302
Spokane, WA, 99202

June 1, 2017

Roy Spino
Water Manager
Confederated Tribes of Warm Springs
PO Box 1209
Warm Springs, OR 97761

Dear Don:

Thank you for the time and assistance from Jason Tohet in completing the sanitary survey of the Sidwalter Community Water System (PWSID 104101101), conducted on 4/25/2017 by the Indian Health Service (IHS). The assessment of the water system is a tool for identifying areas requiring improvement and maintenance, and must be conducted every three years in accordance with the Safe Drinking Water Act (SDWA). A sanitary survey is a comprehensive evaluation of the water source, treatment facilities, operation and maintenance, and management of public water systems. It is intended to improve system safety and operation, and safeguard public health.

Enclosed is the water system's sanitary survey report with IHS' recommended actions to address deficiencies. EPA Region 10 will utilize the results of this report to identify significant and minor deficiencies and notify you of them in a separate letter.

By signing below, I am granting the IHS permission to send a copy of this letter, which summarizes the findings of the Sanitary Survey Form, to the Region 10 Environmental Protection Agency (EPA) Drinking Water Program. Feel free to call me with any questions, comments, or concerns regarding the assessment details.

Sincerely,
Concurrence,

Laddie Folster
Indian Health Service
Tribal Utility Consultant

Water System Manager

6/6/17

Roy Spino Date
Warm Springs Tribe

Enclosures: Sanitary Survey Form, Deficiencies and Recommendations

cc: Jenna Manheimer, Tribal Drinking Water Coordinator, EPA
Matty Haith, District Utility Consultant, Indian Health Service
Don Courtney, General Manager Public Utilities, Warm Springs Indian Reservation
Nancy Collins, EHS, Warm Springs Indian Reservation

Deficiencies and Recommendations

Page 2, Item 4: A sample tap is required after the chlorine is injected. This is important because there are a number of samples that must be taken after treatment as well as measurement of chlorine residuals entering the WST. Recommend installing sample tap. This Deficiency was not corrected from the April 24, 2014 Sanitary Survey.

Page 2, Item 6: The sanitary well cap is lacking a screened (24-mesh) vent, turned downward and a minimum 18-inches above the floor of the pumphouse. There is a plastic tube stuck into the hole where a threaded vent pipe is normally located. Installing a simple treaded pipe in this hole and raising it high enough to turn downward and covering it with a 24-mesh screen is a recommended solution. This Deficiency was not corrected from the April 24, 2014 Sanitary Survey.

Page 2, Item 7: The electrical wire entering the top of the well, enters a penetration through the sanitary well seal that is not sealed adequately to prevent insect entry. This deficiency needs to be corrected because it has been demonstrated insects will enter into the well and can die and fall into the well. Sealing this gap can be as simple as using a calking suitable for potable water or using a seal-tight flexible conduit. This Deficiency was not corrected from the April 24, 2014 Sanitary Survey.

Page 3, Item 63: Safety-No eye-washing provision was seen in the pumphouse in case of splash of the strong chlorine solution. Recommend installing an eye wash station.

Page 4, Item 120: Mr. Tohet indicated the distribution valves were not regularly exercised. Recommend that a valve exercise program be implemented.

Page 4, Item 121: Mr. Tohet indicated that he did not know if customer complaints were investigated. Recommend that customer complaints be investigated and reports filed.

Page 4, Item 124: Mr. Tohet was not aware of a distribution flushing program. Recommend at least annually flushing the water mains in such a way as to eliminate sediments etc.

Page 4, Item 126: Mr. Tohet is not trained in recognizing cross connections. Recommend that the operator and perhaps other utility personnel attend a cross connection training course. Contact IHS for date to the next training.

Page 6, Item 165: Non-sample taps (hose bibs) in the pumphouse need to be equipped with backflow devices such as a vacuum breaker. These are fitted directly to the hose bib and are relatively inexpensive at hardware or plumbing store.

Page 8, Item 216: Lack of a well head protection program.

Page 8, Item 217: CCRs are not distributed on a timely schedule every year.

Page 8, Item 218: Lack of a Master Plan for the Sidwalter CWS.

Page 8, Item 216: Lack of a Water Conservation Plan.

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

1. SITE VISIT INFORMATION

Confederated Tribes of Warm Springs Reservation

SURVEY DATE: **4/25/2017** PWS ID: **104101101**

Sanitary Survey Includes: (1) GW Source ☑ (2) Well Water Treatment Part A ☑ Part B ☐ (3) Distribution ☑ (4) Finished Water Storage ☑ (5) Pumps, PF, and Controls ☑ (6) Monitoring ☑ (7) Management/Operation Capacity ☑ (8) Operator Compliance ☑ (9) Consecutive Systems ☐

Date of last survey	System Type:					District
4/24/2014	Federal Government ☐	State Government ☐	Local ☐	Mixed (Public/Private ☐		**Spokane**
	Private ☐	Native American Government ☑	Other ☐			

# of Residential Connections	# of Non-Residential Connections	Total Population	Indian Population	# of Storage Facilities	# of GW Sources
36	**1**	**135**	**135**	**1**	**1**

Name of Water Supply			Combined Sources			
Sidwalter Community Water System	Water Purchased From: **n/a**	PWS **n/a**	Yes ☐	No ☑		
	Water Sold To: **n/a**	PWS **n/a**	Well Field ☑	Lake ☐	River/Stream ☐	
			Infiltration Gallery ☐	Other ☐		

Water Supply Address	Owner Name
	Confederated Tribes of Warm Springs
Water Supply Mailing Address	Owner Address
	1233 Veterans St
Water Supply City, State, Zip / Water Supply Telephone	Owner City, State, Zip / Owner Telephone
Warm Springs, Oregon 97761	**Warm Springs, Oregon 97761** — **541-553-1161**
Plant Location (if different from above)	**WERE VISUAL STRUCTURAL DEFICIENCIES NOTED DURING THIS SURVEY** YES ☐ NO ☑ IF YES, SEE PAGE(S) _____ OF ____
System Managers Last Name: **Spino**	Individuals present during inspection:
System Managers First Name: **Roy**	Name **Laddie Folster** Title **IHS TUC**
System Managers Address: **PO Box 1209** / System Managers City: **Warm Springs**	Name **Jason Tohet** Title **Operator**
System Managers State: **Oregon 97761** / System Managers Telephone: **541-553-2324**	Name _____ Title _____
	Name _____ Title _____

Water System Classification Service Category: Community Water System ☑ Non-transient Non-community ☐ Transient Non-community ☐ SDWIS Classification: **C** Seasonal: **No**

Surveyors Agency **Indian Health Service**

Comments: **Small rural CWS on the Warm Springs Reservation. Single well with a single WST. Sodium Hypo used for disinfection.**

I have reviewed all pages of the Sanitary Survey form Surveyed by: Laddie C. Folster Date **4/25/2017**

I have reviewed all pages of the Sanitary Survey form Reviewed with Surveyor Date 6/8/17

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

2. GROUNDWATER SOURCES #1

SURVEY DATE: 4/25/2017 | PWS ID: 104101101

Source Name: **Sidwalter Well**

Status: Active ☑ Inactive ☐ Ground water non-purchased ☑ Standby ☐ Emergency ☐ Ground water purchased ☐

Physical Address: **No Address-See Lat Long** Seasonal Operation Dates Start End

Water Purchased From: **n/a** Water Sold To: **n/a**

Treatment Objectives: **Disinfection**

Treatment Methods: **Sodium Hypochlorite**

Has well-log been submitted to EPA? YES ☐ NO ☐ Unknown ☑

Well/Spring Yield (GPM) Pump Capacity (GPM)

Design Daily Production (GPD): **20,000**

Casing Size (in): **8** Casing Depth (ft): **437** Interval Screen Depth (ft): **350-400, 400-437** Grout Depth (ft): **25** Date Drilled: **1/1/1985**

44.88364 LONG **-121.48658** Meridian: **Willamette** Township: **8S** Range: **10E** Section: **12SE** Quarter/Quarter: **SWSE**

Nature of Recharge Area: Confined ☐ Unconfined ☑ Unknown ☐

Formation/Rock Type: **Sandstone/broken lava**

Is there a Well Head Protection Plan of this area? Well Head Protection Yes ☐ NO ☑ UNKNOWN ☐

If yes, is this for all water sources? YES ☐ NO ☑ UNKNOWN ☐

Source of Potential Pollution: **None in Area**

Are static and pumping water levels measured regularly? YES ☐ NO ☑ UNKNOWN ☐

Are chemical contaminants source in sanitary control area? YES ☐ NO ☑ UNKNOWN ☐

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	1.	Is the well provided with a sanitary cap, vent, and seal that are properly installed?
☑	☐	☐	☐	2.	Does the casing extend a minimum of 18-inches above the final ground surface and/or 12-inches above the pump house floor or slab?
☑	☐	☐	☐	3.	Is there a sample tap provided on the well discharge pipe prior to treatment?
☐	☑	☐	☐	4.	Is there a sample tap provided on the well discharge pipe following treatment?
☑	☐	☐	☐	5.	Is the well cased and grout sealed at least 18 feet or in such a manner that surface water cannot enter the well?
☐	☑	☐	☐	6.	Is well vent screened with the return bend facing downward and terminating 18-inches above ground level or above maximum flood level, whichever is higher?
☐	☑	☐	☐	7.	Are conduitsand junction boxes sealed to prevent contaminants from entering the well casing?
☑	☐	☐	☐	8.	Is the source metered?

HAVE THE FOLLOWNG MIN SET-BACK FROM THE PWS WELL BEEN MET?

☑	☐	☐	☐	9.	Gravity sewer line (50 ft)
☑	☐	☐	☐	10.	Pressure sewer line (100 ft)
☑	☐	☐	☐	11.	Individual home septic tank (100 ft)
☑	☐	☐	☐	12.	Individual home disposal field (100 ft)
☑	☐	☐	☐	13.	Livestock (100 ft)
☑	☐	☐	☐	14.	Individual home seepage pit (100 ft)
☐	☐	☐	☑	15.	Is a GWUDI determination necessary for this source?

Surveyed by: **Ladd Folster** Survey Date: **4/25/2017**

MINOR DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	16.	Are pressure tanks, check valves, blow-of valves, water meters, etc, maintained and operating properly?
☑	☐	☐	☐	17.	Is well site properly drained and protected from unauthorized entry?
☑	☐	☐	☐	18.	Is well site protected against flooding?
☐	☑	☐	☐	19.	Can the well be pumped to waste at the design capacity of the well via an approved air gap at a location prior to the first service connection?
☐	☑	☐	☐	20.	Is standby or auxilary power available?
☑	☐	☐	☐	21.	Is a pressure gauge or other means of measuring water level provided at the installation and is it maintained and working properly?

RECOMMENDATION

☐	☐	☐	☑	22.	Has a source water assessment been conducted for this source?

ARE WELL HOUSE BUILDINGS CONSTRUCTED OR MAINTAINED TO PROVIDE:

☑	☐	☐	☐	23.	Lighting
☑	☐	☐	☐	24.	Venting
☑	☐	☐	☐	25.	No storage of toxic/hazard chemical.
☑	☐	☐	☐	26.	Locked to prevent unauthorized entry.
☐	☑	☐	☐	27.	Protection from rodent infestation.

Comments: **Well located inside of Sidwalter PH. Signs of rodent or small animal infestation. Improper well vent. Lack of proper conduit penetration through well cap.**

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

4. WELL WATER TREATMENT #1 AND #2 PART A

SURVEY DATE: 4/25/2017 | PWSID: 104101101

Source treated by station 1	Physical Address 1
Sidwalter	See Lat/Long

Lat/Long	Date Online	Daily Output	Schematic of plant readily available and up to date?
44.88364/-121.48658			Yes ☑ No ☐

Check all disinfection types used:
Gas ☐ Sodium hypochlorite (12 1/2%) ☑ Calcium hypochlorite ☐ Bleach 5 1/4 % ☐
Ozone ☐ UV light ☐ Chlorine dioxide ☐ Other ☐

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	53.	Is the building in good structural condition?
☑	☐	☐	☐	54.	Is the building orderly and clean?
☑	☐	☐	☐	55.	Are chemical shipping containers fully labeled to include chemical name, purity, concentration, etc. and ANSI/NSF certification?

MINOR DEFICIENCY

☑	☐	☐	☐	56.	Are critical spare parts on hand?
☑	☐	☐	☐	57.	How are the feeders set? ☐ Flow paced ☑ Manual
☑	☐	☐	☐	58.	Are chemical solution tanks dept covered?
☑	☐	☐	☐	59.	Is there an adequate quantity of disinfection on hand?
☑	☐	☐	☐	60.	Is there a flow meter in order to determine chemical feed rate?
☑	☐	☐	☐	61.	Are backup chemical feed pumps available and operational?
☑	☐	☐	☐	62.	Is the operator trained to use and conduct monitoring of disinfectant properly?
☐	☑	☐	☐	63.	Is a deluge shower and/or eye washing device installed where strong acids and/or alkalis are used or stored?
☑	☐	☐	☐	64.	Are chemical feed pumps controlled by a flow sensing devise so that injection of the chemicals will not continue when flow of the water stops?
☑	☐	☐	☐	65.	Are cross connection controls provided so the liquid chemical solutions cannot be siphoned through the solution feeders into the water supply?
☑	☐	☐	☐	66.	PPE equipment – are at least one pair of rubber gloves, a dust respirator of a type certified by NIOSH for toxic dusts, an apron or other protective clothing and goggles or face mask provided for each operator?

RECOMMENDATION

☑	☐	☐	☐	67.	Is the chemical feed equipment readily accessible for servicing, repair and observation of operation?
☐	☑	☐	☐	68.	Have any changes been made to this treatment facility since the last survey?
☐	☐	☑	☐	69.	When more than one (1) chemical is stored or handled, are tanks and pipelines clearly labeled to identify the chemical they contain?
☐	☑	☐	☐	70.	Have there been any interruptions in disinfection in the past year?

Surveyed by:	Survey Date
Ladd Folster	4/25/2017

Source treated by station 2	Physical Address 2

Lat/Long	Date Online	Daily Output	Schematic of plant readily availabl and up to date?
			Yes ☐ No ☐

Check all disinfection types used:
Gas ☐ Sodium hypochlortie (12 1/2%) ☐ Calcium hypochlorite ☐ Bleach 5 1/4 % ☐
Ozone ☐ UV light ☐ Chlorine dioxide ☐ Other ☐

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☐	☐	☐	☐	53.	Is the building in good structural condition?
☐	☐	☐	☐	54.	Is the building orderly and clean?
☐	☐	☐	☐	55.	Are chemical shipping containers fully labeled to include chemical name, purity, concentration, etc. and ANSI/NSF certification?

MINOR DEFICIENCY

☐	☐	☐	☐	56.	Are critical spare parts on hand?
☐	☐	☐	☐	57.	How are the feeders set? ☐ Flow paced ☐ Manual
☐	☐	☐	☐	58.	Are chemical solution tanks dept covered?
☐	☐	☐	☐	59.	Is there an adequate quantity of disinfection on hand?
☐	☐	☐	☐	60.	Is there a flow meter in order to determine chemical feed rate?
☐	☐	☐	☐	61.	Are backup chemical feed pumps available and operational?
☐	☐	☐	☐	62.	Is the operator trained to use and conduct monitoring of disinfectant properly?
☐	☐	☐	☐	63.	Is a deluge shower and/or eye washing device installed where strong acids and/or alkalis are used or stored?
☐	☐	☐	☐	64.	Are chemical feed pumps controlled by a flow sensing devise so that injection of the chemicals will not continue when flow of the water stops?
☐	☐	☐	☐	65.	Are cross connection controls provided so the liquid chemical solutions cannot be siphoned through the solution feeders into the water supply?
☐	☐	☐	☐	66.	PPE equipment – are at least one pair of rubber gloves, a dust respirator of a type certified by NIOSH for toxic dusts, an apron or other protective clothing and goggles or face mask provided for each operator?

RECOMMENDATION

☐	☐	☐	☐	67.	Is the chemical feed equipment readily accessible for servicing, repair and observation of operation?
☐	☐	☐	☐	68.	Have any changes been made to this treatment facility since the last survey?
☐	☐	☐	☐	69.	When more than one (1) chemical is stored or handled, are tanks and pipelines clearly labeled to identify the chemical they contain?
☐	☐	☐	☐	70.	Have there been any interruptions in disinfection in the past year?

Comments:

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE: 4/25/2017 | PWSID: 104101101

6. DISTRIBUTION

What type of material are the pipe(s): PVC ☑ AC ☐ PE ☑ CI/DI ☐

Distribution line (Diameter and type)	Service line (Diameter and type)
1. 4" PVC	1. 1" HDPE
2.	2.

How many service lines are metered?	Number of Fire Hydrants (types if known)
36 out of 36	1. 2
	2.

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	110.	Are there hydrants or adequate blow-offs to flush all dead-end on the system?
☑	☐	☐	☐	111.	Are disinfectant residual measurements being made and recorded at the entry point of the distribution system?
☑	☐	☐	☐	112.	Is there a disinfectant residual of at least 0.2 mg/l at the entry point of the distribution system?
☑	☐	☐	☐	113.	Is a detectable free chlorine residual being maintained throughout the distribution system?
☑	☐	☐	☐	114.	Are proper residual test kits available and well-stocked with reagents (DPD)?
☑	☐	☐	☐	115.	Is the PWS able to maintain a minimum pressure of twenty (20) psi throughout the distribution system (including fire flow)?
☐	☐	☑	☐	116.	Is the system protected from obvious cross connection observed during the survey?
☐	☐	☑	☐	117.	Is there a requirement for annual testing of installed backflow prevention devices?
☑	☐	☐	☐	118.	Is there sufficient contact time between the disinfection point and first point in use? If not, is the system performing triggered monitoring?

MINOR DEFICIENCY

YES	NO	N/A	UN		
☑	☐	☐	☐	119.	Are accurate O and M records being maintained (check records)?
☐	☑	☐	☐	120.	Are valves periodically exercised?
☐	☑	☐	☐	121.	Are customer complaints and investigation reports kept?
☐	☐	☐	☑	122.	Are all automatic air relief valves equipped with a means of backflow protection?
☐	☐	☑	☐	123.	Are ARV's turned down, screened, and protected from cross connection?
☐	☑	☐	☐	124.	Is there a routine main and dead-end water flushing program?
☐	☐	☑	☐	125.	Are backflow prevention devices installed at all appropriate locations?
☐	☑	☐	☐	126.	Is the operator trained in cross connection control?
☑	☐	☐	☐	127.	Are proper procedures followed for disinfection of new construction or repairs?

RECOMMENDATION

☑	☐	☐	☐	128.	Is there an inspection of new construction as well as follow-up inspections?
☐	☑	☐	☐	129.	Is there a leak detection program?
☐	☑	☐	☐	130.	Are all service metered and are meters routinely read?
☐	☑	☐	☐	131.	Was asbestos/cement pipe used in the system?

Comments

Surveyed by:	Survey Date
Ladd Folster	4/25/2017

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

7. FINISHED WATER STORAGE #1

Total Storage Capacity (gal) **209,000**

SURVEY DATE **4/25/2017** | PWSID **104101101**

Storage structure name **Sidwalter** Physical location:

Corrosion control **Cathodic** Storage type **Standpipe**

Date in service **UNK** Type of material **Bolted steel** Volume(gal): **209,000**

Total days of supply **3** Date last: Cleaned Inspected

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	132.	Is treated water storage covered or enclosed?
☑	☐	☐	☐	133.	Is the storage structure clean and free from contamination?
☑	☐	☐	☐	134.	Is the storage structure structurally sound?
☑	☐	☐	☐	135.	Is the storage structure safely accessible to inspector?
☑	☐	☐	☐	136.	Is an overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve?
☑	☐	☐	☐	137.	Are access manhole openings for the storage structure 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked?
☑	☐	☐	☐	138.	Are overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface?

MINOR DEFICIENCY

☐	☑	☐	☐	139.	Is leakage evident at time of inspection?
☐	☐	☐	☑	140.	Is the storage structure interior coating or liner peeling or cracked?
☑	☐	☐	☐	141.	Can the storage structure be isolated from the system for repairs or cleaning?
☑	☐	☐	☐	142.	Is the storage structure protected against flooding?
☑	☐	☐	☐	143.	Do all vents open downward and are they fitted with a 4-mesh non-corrodible screen?
☑	☐	☐	☐	144.	Is the storage structure secured from unauthorized access?
☑	☐	☐	☐	145.	Does the overflow have a splash pad?
☐	☑	☐	☐	146.	Is there a separate drain line on the storage structure?

RECOMMENDATION

☐	☑	☐	☐	147.	Is there a water-sampling tap provided at the storage structure outlet?
☑	☐	☐	☐	148.	Is storage structure lined?

Yes ☑ No ☐ Line Type ?
Fused Glass Liner

Surveyed by: **Ladd Folster** Survey Date **4/25/2017**

Pressure tank name Physical location:

Type of hydropneumatic system: Non-bladder ☐ Bladder ☐

Date in service Type of material Volume (gal)

Total design capacity Date last: Cleaned Inspected

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
					HYDROPNEUMATIC SYSTEM
☐	☐	☐	☐	151.	Can the hydropneumatic tank(s) be isolated from the system, permitting operation of the systems?
☐	☐	☐	☐	152.	Is/are tank(s) located above normal ground surface and completely housed?
☐	☐	☐	☐	153.	Do the tank(s) maintain adequate distribution system pressure?
☐	☐	☐	☐	154.	Is there a pressure gauge and pressure operated start-stop control?
☐	☐	☐	☐	155.	Is the pressure tank being inspected?

MINOR DEFICIENCY

BLADDER AND NON-BLADDER

☐	☐	☐	☐	156.	Can the tank(s) be isolated with a shut-off valve for repairs or replacement

NON-BLADDER

☐	☐	☐	☐	157.	Is an oil-less air compressor in service for the hydropneumatic pressure tank?
☐	☐	☐	☐	158.	Has the non-bladder pressure tank(s) been tested for structural integrity in the past 5 years?
☐	☐	☐	☐	159.	Do all non-bladder hydro pneumatic tank(s) have the following? Check all that apply:

Water sight glass ☐ A drain ☐ Access MH ☐
Means to add air ☐ Automatic or manual air blow-off ☐

RECOMMENDATION

☐	☐	☐	☐	160.	Are the interior and/or exterior surfaces in good condition?
☐	☐	☐	☐	161.	Is there a drain line on each tank?

What is the make and model of the tanks?

Number and tank(s) in gallon

Comments **Aquastore WST. Combination overflow and drain directed to concrete structure that serves as splash pad. Functioning sealed flapper valve at terminus.**

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

8. PUMPS, PUMP FACILITIES, AND CONTROLS #1

SURVEY DATE: 4/25/2017 | PWSID: 104101101

Source Treated By Station: **Sidwalter Well inside Sidwalter PH**

Physical Address:

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	162.	Is adequate ventilation provided in the pump house for dissipation of excess heat and moisture from the equipment?
☑	☐	☐	☐	163.	Is the building in good structural condition?
☑	☐	☐	☐	164.	Is the building orderly and clean?

MINOR DEFICIENCY

PUMPHOUSE

☐	☑	☐	☐	165.	Are all non-sample taps installed in the pump house equipped with an appropriate backflow prevention device?
☑	☐	☐	☐	166.	Is the pump house protected from flooding, have adequate drainage and is the floor surface at least six (6) inches above the final ground surface?
☐	☐	☑	☐	167.	Is the sump for the pump house floor drain closer than 30 feet from the well?
☑	☐	☐	☐	168.	Is the pump house protected from unauthorized personnel?

BOOSTER PUMP

☐	☐	☑	☐	169.	Are backup pumps, motors or other critical spare parts kept on-site?
☐	☐	☑	☐	170.	Are pump records maintained?
☐	☐	☑	☐	171.	Are all pumps capable of providing the max pumping demand of the system?
☐	☐	☑	☐	172.	Does the pump(s) cycle excessively?
☐	☐	☑	☐	173.	Are all pumps provided with readily available spare parts and tools?
☐	☐	☑	☐	174.	Do all pumps maintain an operating pressure of 20 psi or greater?

RECOMMENDATION

☐	☑	☐	☐	175.	Is a water pressure relief valve installed where the pump is directly connected to the distribution system?
☑	☐	☐	☐	176.	Is the pump house kept clean and in good repairs?
☑	☐	☐	☐	177.	Does the pump house have adequate lighting throughout?

SOURCE PUMP INSTALLED

Pump type: Submersible ☑ Centrifugal ☐ Variable Frequency Drive (VFD) ☐

Pump Nomenclature: Pump make **Franklin** Pump model **2366136010** Date installed

Pump Capacity: Pump hp **15** GPM

Pump Controls have: Float switch ☐ Run Hour Meter ☐ Pump Protector ☐ Pressure Switch ☐
Lead/Lag ☐ Manual ☑ Sequencer ☐ Controls Other ☐

Comments

Some signs of rodent or small aninmal infestation. Need to be addressed or kept clean as well as possible. Three Phase power for the well pump is through a Rotary Generator.

What are the most frequent Complaints?

Surveyed by: **Ladd Folster** Survey Date: **4/25/2017**

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

9. MONITORING

SURVEY DATE: 4/25/2017 | PWSID: 104101101

Name of Water Supply: **Sidwalter Community Water System**

Tribe: **Confederated Tribes of Warm Springs Reservation**

SIGNIFICANT DEFICIENCY

Is the system in monitoring compliance for the following parameters:

AT THE ENTRY POINT

YES	NO	N/A	UNK		
☑	☐	☐	☐	178.	Nitrate
☑	☐	☐	☐	179.	Inorganics (including nitrates)
☑	☐	☐	☐	180.	Gross Alpha Screen Uranium
☑	☐	☐	☐	181.	VOC
☑	☐	☐	☐	182.	SOC
☑	☐	☐	☐	183.	Arsenic
☐	☐	☑	☐	184.	CT Value (for systems avoiding triggered monitoring
☐	☐	☑	☐	185.	Turbidity
☐	☐	☑	☐	186.	Fluoride
☐	☐	☑	☐	187.	Bromate ozone (if required)
☑	☐	☐	☐	188.	Radium 228/226

IN THE DISTRIBUTION

YES	NO	N/A	UNK		
☑	☐	☐	☐	189.	Coliform
☑	☐	☐	☐	190.	Lead Copper (# of sites)
☐	☐	☑	☐	191.	Asbestos
☑	☐	☐	☐	192.	TTHM
☑	☐	☐	☐	193.	HAA5s
☑	☐	☐	☐	194.	Maximum Residual Disinfectant level
☐	☐	☑	☐	195.	Are copies of public notices available?
☑	☐	☐	☐	196.	Is all required monitoring current?
☑	☐	☐	☐	197.	Are TTHM samples taken at location of maximum residence tim
☑	☐	☐	☐	198.	Are HAA5 samples taken at location of maximum residence time

MINOR DEFICIENCY

Are the following records maintained on-site or location nearby?

YES	NO	N/A	UNK		
☑	☐	☐	☐	201.	Bacteriological Analysis
☑	☐	☐	☐	202.	Chemical Analysis
☐	☐	☐	☑	203.	Violation records
☑	☐	☐	☐	204.	Copies of past sanitary survey
☐	☐	☐	☑	205.	Reports of variance or exemption
☐	☐	☐	☑	206.	Copies of public notices
☑	☐	☐	☐	207.	Daily free chlorine residuals are not kept on site
☑	☐	☐	☐	208.	Are daily free/total chlorine residual taken?

Comments

Surveyed by: **Ladd Folster** | Survey Date: **4/25/2017**

PORTLAND AREA INDIAN HEALTH SERVICE
PUBLIC WATER SYSTEM SANITARY SURVEY

SURVEY DATE 4/25/2017 PWSID 104101101

10. MANAGEMENT/OPERATION CAPACITY

SIGNIFICANT DEFICIENCY

YES	NO	N/A	UNK		
☑	☐	☐	☐	209.	Is the Manager/Contractor certified at appropriate level?
☑	☐	☐	☐	210.	Does the Water System have an operation and maintenance manual?
☑	☐	☐	☐	211.	Does the system have written standard operating protocol for other operators?
☑	☐	☐	☐	212.	Does the water system have an emergency response plan?
☑	☐	☐	☐	213.	Does the Water System have a Cross-Connection Control Program?

MINOR DEFICIENCY

☑	☐	☐	☐	214.	Is the Water System in compliance?
☐	☑	☐	☐	215.	Does the system have more than 4 violations in the past two years?
☐	☑	☐	☐	216.	Does the Water System have a Wellhead Protection Program?
☐	☑	☐	☐	217.	Are consumer confidence reports sent to users each year?
☐	☑	☐	☐	218.	Does the Water System have a current master plan?
☐	☑	☐	☐	219.	Does the master plan include a water conservation plan?
☐	☐	☑	☐	220.	What year was the master plan completed? _____
☑	☐	☐	☐	221.	Is there a written Water Quality Monitoring site plan/program available for review?

RECOMMENDATION

☑	☐	☐	☐	222.	Does the Water System have an Operating Budget?
☑	☐	☐	☐	223.	Does the Water System have a service area and facility map?
☑	☐	☐	☐	223.	Does the Water System have a water facilities inventory?
☐	☑	☐	☐	225.	Has a capacity assessment been completed?
☑	☐	☐	☐	226.	Does the PWS have a governing body or board of directors?
☑	☐	☐	☐	227.	Is there a clear plan of organization and control among the people responsible for management and operation of the Water System?
☐	☑	☐	☐	228.	Does the Water System have emergency power?

☐ Generator, automatic switchover ☐ Transfer switch only
☐ Generator, manual switchover ☐ Other
☐ Portable with transfer switch

Frequency of testing generator:

☐ Monthly ☐ Quarterly ☐ Annually ☐ Infrequently
☐ Never

Surveyed by:	Survey Date
Ladd Folster	**4/25/2017**

8. OPERATOR COMPLIANCE

SIGNIFICANT DEFICIENCY

229. Operator Qualification or Certification

Operator(s) Name	Cert. by	Cert. No.	Cert. Level	Meets System Requirements	Date Issued	Date Expires
Roy Spino T-08378	**OR** D-08377		**D1**	**Yes**		12/31/17
Jason Tohet	**OR**		**D1**	**Yes**		

YES	NO	N/A	UNK		
☑	☐	☐	☐	230.	Are Operators certified at the appropriate level?

MINOR DEFICIENCY

☑	☐	☐	☐	231.	Is a properly certified operator available at all times?

9. OTHER

SIGNIFICANT DEFICIENCY

Are any of the deficiencies listed below noted elsewhere in this survey?

YES	NO	N/A	UNK		
☐	☐	☐	☐	232.	
☐	☐	☐	☐	233.	
☐	☐	☐	☐	234.	
☐	☐	☐	☐	235.	
☐	☐	☐	☐	236.	
☐	☐	☐	☐	237.	

Comments: **CCR Violations for 2001, 2012, 2013**

From: Duvil, Ricardi
To: Thurmon, Clarke
Subject: Warm Springs Water Response Letter
Date: Monday, December 17, 2018 3:17:00 PM
Attachments: Warm Springs Water System_NOD Letter_ Response_12.18.2018.docx

---

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

OFFICE OF
WATER AND
WATERSHEDS

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

December 18, 2018

Travis Wells, General Manager
Warm Springs Water Treatment Plant
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re Report to our Immediate Public Health Concerns and Sanitary Survey Significant Deficiencies
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Wells:

This letter is to inform you that the Environmental Protection Agency has received your report regarding how the Confederated Tribes of Warm Springs (Tribe) intends to address the most immediate public health concerns listed in our letter dated November 28, 2018. We appreciate your collaboration with Indian Health Service's tribal utility consultant Laddie Folster in addressing some of the highlighted immediate threat to public health and your commitment to resolve the overall list of significant deficiencies outlined in the July 2018 sanitary survey. After a careful review of your report, the EPA still has some serious public health concerns that need to be addressed immediately since these immediate concerns have the potential to impair water quality, jeopardize public health, and violate the Safe Drinking Water Act.

Immediate Public Health Concerns

1. Recalibrate or Replace the turbidimeter at Individual Filter Effluent # 2 (IFE #2)
   - Under the Surface Water Treatment Rule,

2. Remove the solids from the settling tanks.

Develop and implement standard operating procedures regarding the coagulation process

serious concerns regarding the Warm Springs Water Treatment Plant. We previously have shared our concerns with your staff and now are elevating these issues to you, with the goal of working together at the leadership level, to quickly improve conditions.

Thank you for having your sanitary survey conducted by Indian Health Service's tribal utility consultant Laddie Folster on July 18, 2018. A Sanitary Survey is a comprehensive evaluation of the source, pumps and pumping facilities, treatment, storage, distribution, laboratory facilities, management and operator qualifications at a public water system, required under the National Primary Drinking Water Regulations (40 CFR Part 141). This letter is to inform you that significant deficiencies were identified at Warm Springs Water Treatment Plant during the sanitary survey.

These significant deficiencies have the potential to impair your water quality and jeopardize public health. Significant deficiencies require immediate attention and must be corrected within 45 days from receipt of this letter. If you are not able to address significant deficiencies by this deadline, you will be in violation of the National Primary Drinking Water Regulations (40 CFR §142.16(b)) and must notify EPA immediately. EPA will then issue an approved corrective action plan (CAP) with a timeline to address these deficiencies under a formal enforcement order.

Under the Surface Water Treatment Rule (SWTR), correction of significant deficiencies must be addressed within 45 days from receipt of this letter. Please submit documentation and proof of significant deficiency corrections made to Ricardi Duvil, Ph.D., P.E, duvil.ricardi@epa.gov within the 45-day deadline.
EPA reserves the right to pursue enforcement actions against Warm Springs Water Treatment Plant for failure to address these deficiencies within this letter in a timely manner.

The list of significant deficiencies for your water system is provided in attachment A – Significant deficiencies. If you have any questions or would like to address the findings of the sanitary survey, please contact Ricardi at 206.553.2578.

We would like to thank you and your staff for their cooperation and time on the survey as well as assistance in addressing these findings.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Enclosures: Attachment A- Significant Deficiencies for Warm Springs Water Treatment Plant

Cc: Alyssa Macy, Chief Operations Officer
Mr. Laddie Folster, Tribal Utility Consultant, Indian Health Services

Attachment A – Significant deficiencies for Warm Springs Water Treatment Plant.

- Page 3 # 91-WTP: The primary coagulant Aluminum Chlorohydrate (ACH) is not being optimized for the process. The Streaming Current Monitor (SCM) is operating but inaccurate and the operators do not jar test. Without having the SCM or daily jar testing, there is no accurate measure to indicate the correct dosage of ACH. Current method is based on operator experience, changes in Turbidity and guessing. Added to this is the injection of chlorine into the process at the point where the ACH is injected. This complicates the ACH dosage because chlorine interferes with the ACH.

- Page 5 # 137- Tee Wees: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 6 # 138- The roof top vent has rusted through into the WST with holes and the vent needs 24-Mesh screen to prevent insect entrance.

- Page 6 # 137- Kah-Ne-Ta: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 14 # 237- Small Out of Service Concrete WST needs to be physically disconnected from distribution system.

- Page 14 # 236-WTP CFE Turbidimeter sampling delay needs to be reduced.

- Page 14 # 235-WTP: River intake air scour system inoperative. Gasket blown on screen in river reducing effectiveness of air scour cleaning.

- Page 14 # 234-WTP: Filter #2 IFE Turbidimeter sampling pump is non-operable.

- Page 14 # 233-WTP: Turbidimeters are out of calibration.

- Page 14 # 232-WTP: Sedimentation basin needs settled solids removed.

- Page 12 # 162-WTP: Ventilation in the main service pump room is lacking and require the operators to run portable fans and opening the doors.

- Page 11 # 138-Greely East: overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. Overflow has flapper valve that does not fully seal.

- Page 11 # 137-Greely East: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Unable to access top of water tank to inspect items listed.

- Page 11 # 136-Greely East: Is an overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 10 # 137-Greely West: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.
- Page 9 # 137- West Hills East: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Unable to access top of water tank to inspect items listed.

- Page 9 # 136- West Hills East: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 9 # 135-West Hills East: The storage structure is not safely accessible to inspector. This storage tank is the oldest on the water system. The roof access ladder is unsafe due to not having a ladder cage.

- Page 8 # 138- West Hills West: Overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. The 24-mesh screen is torn on vent and a hole in the roof structure was found.

- Page 8 # 137- West Hills West: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 8 # 136- West Hills West: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 7 # 138- Southeast: Overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. The roof top vent has rusted through into the WST with holes.

- Page 7 # 137-Southeast: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 7 # 136-Southeast: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

From: Duvil, Ricardi
Sent: Tuesday, November 13, 2018 4:29 PM
To: Jennings, Marie
Subject: FW: Boil Water Notice - Warm Springs
Attachments: Warm Springs Water System_11_13_18.docx

Hi Marie:

Attached is the letter for Warm Spring Water System to lift the Boil Water Notice . I incorporated Clarke's edits as well.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

From: Thurmon, Clarke
Sent: Tuesday, November 13, 2018 4:09 PM
To: Duvil, Ricardi <duvil.ricardi@epa.gov>
Cc: Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>
Subject: RE: Boil Water Notice - Warm Springs

Ricardi,

Hi.
Thanks for letting me know about this issue. (b)(5) Attorney Client Privilege / Deliberative Process
(b)(5) Attorney Client Privilege / Deliberative Process .

Please give me a call if you have any questions.

Thanks,
Clarke

Clarke Thurmon
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 10, Office of Regional Counsel
1200 Sixth Avenue, Suite 155
M/S ORC-113
Seattle, WA 98101
Desk (206) 553-2585
Fax (206) 553-1762
Thurmon.Clarke@EPA.gov

From: Duvil, Ricardi
Sent: Tuesday, November 13, 2018 2:11 PM
To: Thurmon, Clarke <Thurmon.Clarke@epa.gov>
Subject: Boil Water Notice

I left you a voicemail.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

OFFICE OF
WATER AND
WATERSHEDS

November 13, 2018

Travis wells, General Manager
Warm Springs Water Treatment Plant
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Boil Water Notice Issued on November 5, 2018
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Wells:

We recently reviewed Warm Springs Water Treatment Plant's (WSWTP) bacteriological results for total coliform and E. coli, along with chlorine residual levels sampled on November 8, 2018. We also reviewed WSWTP's completion report for the repair due to loss of pressure event that occurred on Sunday, November 4, 2018. As you are aware, a boil water notice is currently in effect to protect public health.

Based on information provided by WSWTP on November 11, 2018, our review showed, after the main line repair was completed, sampling results for both total coliform and E. coli were absent and free chlorine residual levels have returned to baseline levels. As a result, EPA is comfortable with WSWTP lifting the boil water notice.

If you have any questions, please contact Ricardi Duvil, Ph.D., P.E., Surface Water Rule Manager, at (206) 553-2578 or duvil.ricardi@epa.gov. We appreciate your efforts to protect the health of the customers of your drinking water system.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

From: Duvil, Ricardi on behalf of Thurmon, Clarke
To: Chung, Angela; Manheimer, Jenna; Duvil, Ricardi; Contreras, Peter; Steiner-Riley, Cara
Subject: FW: Warm Springs discussion
Attachments: Warm Springs Water System_NOD Letter_11.20.2018.docx

---

-----Original Appointment-----
From: Thurmon, Clarke
Sent: Tuesday, November 20, 2018 11:42 AM
To: Thurmon, Clarke; Manheimer, Jenna; Duvil, Ricardi; Contreras, Peter; Steiner-Riley, Cara
Subject: Warm Springs discussion
When: Monday, November 26, 2018 3:30 PM-4:30 PM (UTC-08:00) Pacific Time (US & Canada).
Where: R10Sea-Room-20Stehekin/R10-Rooms-Service-Center

Hello all,

Let's discuss (b)(5) Attorney Client Privilege / Deliberative Process as well as the (b)(5) Attorney Client Privilege / Deliberative Process

Thanks,
Clarke

From:	Wilson, Wenona
To:	Opalski, Dan; Contreras, Peter; Patheal, Bella
Cc:	Chung, Angela; Thurmon, Clarke; Jennings, Marie; Kowalski, Edward; Manheimer, Jenna; Duvil, Ricardi; Steiner-Riley, Cara; Kenknight, Jeff
Subject:	RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter
Date:	Tuesday, November 27, 2018 9:53:15 AM
Attachments:	Warm Springs Water System_NOD Letter_112618_final AC edits-do-ww (004).docx

Here is the latest. b5 - Deliberative Process

Water program should read through again. Also, Peter, I was well into editing Dan's last version before I saw you had suggested edits. I believe I captured them but you may want to double check.

I don't need to see it again. I'm sending to Bella so she can get started with formatting. Let her know if you see something that must be fixed.

Thanks,

Wenona Wilson
(206) 553-2148

From: Opalski, Dan
Sent: Tuesday, November 27, 2018 8:39 AM
To: Contreras, Peter <Contreras.Peter@epa.gov>
Cc: Chung, Angela <Chung.Angela@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: Re: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Thanks, Peter, I did send to Bella for that purpose a little earlier. Wenona has talked with Chris and so will be making additional edits. We will work on signing from WOO this morning.

Sent from my iPhone

On Nov 27, 2018, at 8:33 AM, Contreras, Peter <Contreras.Peter@epa.gov> wrote:

> I gave another read through & suggested edits.
>
> Dan/Angela – do you want to send to Bella for formatting and have it ready for signature once you hear from Wenona?
>
> Peter

<image001.png> **Peter Contreras,** Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Opalski, Dan
Sent: Tuesday, November 27, 2018 7:51 AM
To: Chung, Angela <Chung.Angela@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

From: Opalski, Dan
Sent: Tuesday, November 27, 2018 7:33 AM
To: Chung, Angela <Chung.Angela@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

I have added a few more. b5 - Deliberative Process

From: Chung, Angela
Sent: Monday, November 26, 2018 6:47 PM
To: Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Hi All,
I started to edit the letter because I saw a few typos and then couldn't resist making

some other suggestions to improve flow. See attached for suggested edits. Thanks.

Angela Chung
Associate Director, Office of Water and Watersheds
U.S. Environmental Protection Agency
1200 Sixth Ave, Suite 155, OWW 191
Seattle, WA 98101
Phone: 206-553-6511

From: Thurmon, Clarke
Sent: Monday, November 26, 2018 4:59 PM
To: Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Hello All.

Please see the attached as the final version, provided discussion with Chris (b)(5) Attorney Cl
(b)(5) Attorney Client Privilege / Deliberative Process

Thanks,
Clarke

Clarke Thurmon
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 10, Office of Regional Counsel
1200 Sixth Avenue, Suite 155
M/S ORC-113
Seattle, WA 98101
Desk (206) 553-2585
Fax (206) 553-1762
Thurmon.Clarke@EPA.gov

From: Contreras, Peter
Sent: Monday, November 26, 2018 4:46 PM
To: Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Here's the revised version as of 4pm meeting …. Marie/OWW to finalize pending OK by Wenona (checking in with Chris)

<image001.png>

Peter Contreras, Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Contreras, Peter
Sent: Monday, November 26, 2018 3:22 PM
To: Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

All: For discussion at 4pm . . . Here is the updated letter based on Ricardi, Clarke, Jenna, Cara and my collective editing. Thanks to Clarke for facilitating our 2pm working session!

See everyone at 4pm Stehekin to finalize letter/answer any question.

Thanks,

Peter

<image001.png>

Peter Contreras, Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Jennings, Marie
Sent: Monday, November 26, 2018 2:34 PM
To: Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>; Carre, Kristine <Carre.Kristine@epa.gov>; Murphy, Stacy <Murphy.Stacy@epa.gov>; Szerlog, Michael <Szerlog.Michael@epa.gov>
Cc: Hamlin, Tim <Hamlin.Tim@epa.gov>; McCullough, Barbara <McCullough.Barbara@epa.gov>; Pepple, Karl <Pepple.Karl@epa.gov>; Carvalho, Gabriela <Carvalho.gabriela@epa.gov>; McMonagle, Rick <mcmonagle.richard@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY

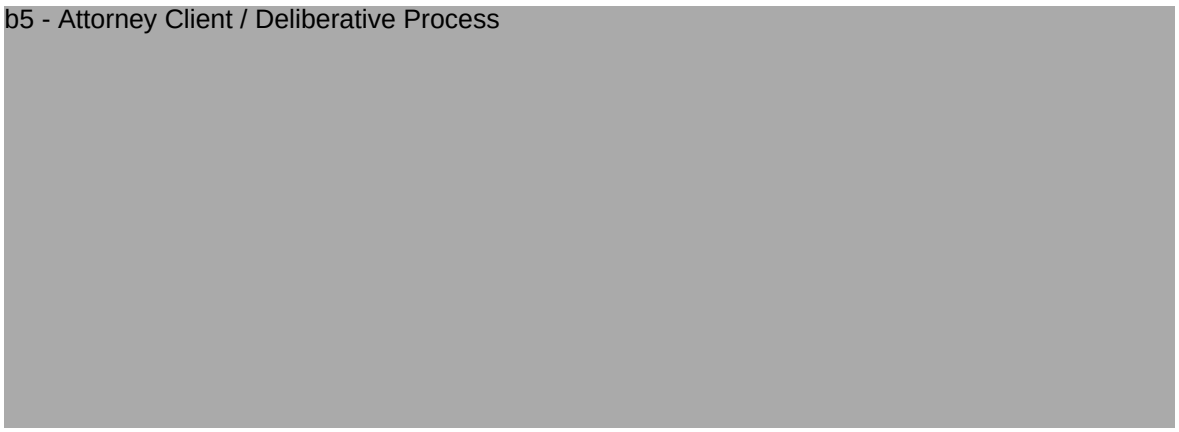
Hi Wenona

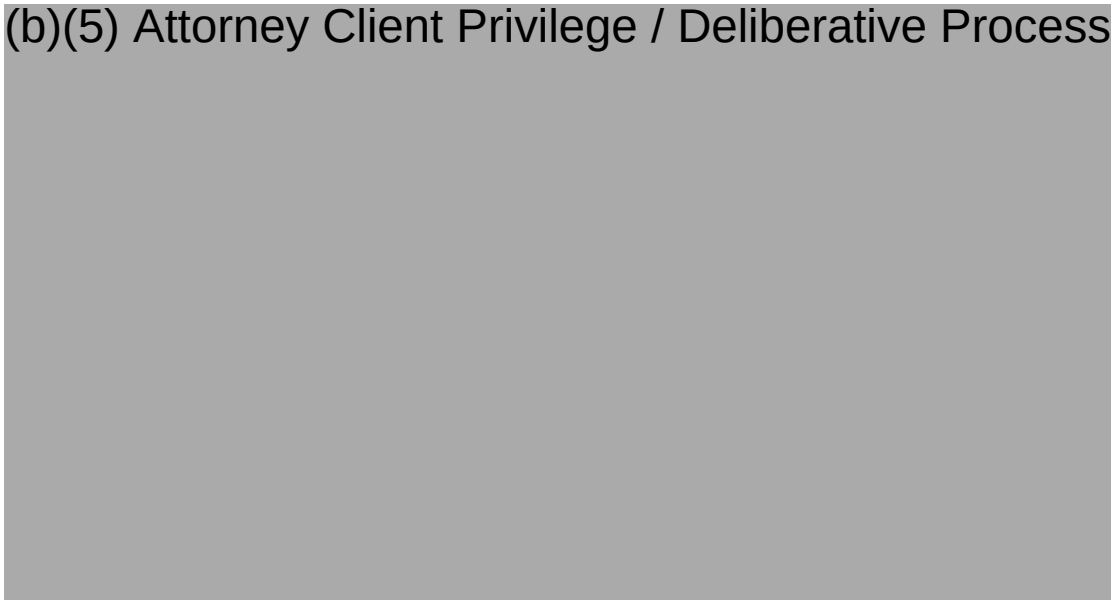
Below is a slightly more detailed summary of the Drinking Water Treatment Plant. Feel free to cut it down, if this is too much information. This information was taken from the briefing document that Ricardi initiated and Clarke Thurmon and I provided edits.

Drinking Water Treatment Plant

The Warm Springs public water system (PWS or System) is one of three PWSs on the Warm Springs Reservation for which EPA has primacy. The other two Systems, Sidwater and Simnashoo Schoolie, unlike Warm Springs which is a surface water system, are ground water Systems.
The Warm Springs Water Treatment Plant was originally constructed in 1980, with improvements completed in 2000 to automate the system and make process control improvements. The water treatment plant has a designed capacity of approximately 4.3 mgd (3,000 gpm). Warm Springs CWS serves approximately 3800 persons. The watershed is a relatively isolated and undeveloped basin but may be impacted by cattle grazing on open rangeland and two upstream discharges Warm Springs Wastewater Plant effluent and a lumber mill.

b5 - Attorney Client / Deliberative Process





Marie Jennings
Drinking Water Unit, Manager
206-553-1893
206-369-9625 - EPA cell

From: Wilson, Wenona <Wilson.Wenona@epa.gov>
Sent: Monday, November 26, 2018 1:20 PM
To: Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>; Carre, Kristine <Carre.Kristine@epa.gov>; Murphy, Stacy <Murphy.Stacy@epa.gov>; Szerlog, Michael <Szerlog.Michael@epa.gov>
Cc: Hamlin, Tim <Hamlin.Tim@epa.gov>; McCullough, Barbara <McCullough.Barbara@epa.gov>; Pepple, Karl <Pepple.Karl@epa.gov>; Carvalho, Gabriela <Carvalho.gabriela@epa.gov>; McMonagle, Rick <mcmonagle.richard@epa.gov>
Subject: 11/28 Warm Springs Briefing

Hi team, below is my suggested agenda for the RA/DRA briefing to prepare Chris for our Dec 4 meeting with the Warm Springs Tribal Council. The briefing is scheduled, Wednesday, 11/28, from 2:30-3:30 p.m. Please let me know if you have recommended changes to the briefing agenda.

I've attached a general briefing paper and the Treaty, which Tribal Coordinator Kris Carre, submitted. Thanks Kris! If you plan to submit additional information, please send

to Pam Gahner and me ASAP.

2:30 Brief overview of Dec 4 visit – Wenona Wilson (5)
2:35 Tribal background (including landfill/other env. issues) - Kris Carre (10)
2:45 Wastewater Treatment Facility – Enforcement Program (10)
2:55 Warm Springs Water Treatment Plant – Water Program (25)
3:20 Next Steps

Thank you,
Wenona Wilson
Senior Tribal Policy Advisor
EPA Region 10
(206) 553-2148

<Warm Springs Water System_NOD Letter_112718_final.docx>

From:	Contreras, Peter
To:	Opalski, Dan; Chung, Angela; Thurmon, Clarke; Jennings, Marie; Wilson, Wenona; Kowalski, Edward; Manheimer, Jenna; Duvil, Ricardi; Steiner-Riley, Cara; Kenknight, Jeff
Subject:	RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter
Date:	Tuesday, November 27, 2018 8:33:55 AM
Attachments:	image001.png Warm Springs Water System_NOD Letter_112718_final.docx

I gave another read through & suggested edits.

Dan/Angela – do you want to send to Bella for formatting and have it ready for signature once you hear from Wenona?

Peter

Peter Contreras, Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Opalski, Dan
Sent: Tuesday, November 27, 2018 7:51 AM
To: Chung, Angela <Chung.Angela@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

From: Opalski, Dan
Sent: Tuesday, November 27, 2018 7:33 AM
To: Chung, Angela <Chung.Angela@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

I have added a few more. b5 - Deliberative Process

From: Chung, Angela

Sent: Monday, November 26, 2018 6:47 PM
To: Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Hi All,
I started to edit the letter because I saw a few typos and then couldn't resist making some other suggestions to improve flow. See attached for suggested edits. Thanks.

Angela Chung
Associate Director, Office of Water and Watersheds
U.S. Environmental Protection Agency
1200 Sixth Ave, Suite 155, OWW 191
Seattle, WA 98101
Phone: 206-553-6511

From: Thurmon, Clarke
Sent: Monday, November 26, 2018 4:59 PM
To: Contreras, Peter <Contreras.Peter@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Hello All.

Please see the attached as the final version, provided discussion with Chris (b)(5) Attorney Client Privilege / Deliberative Process [redacted]

Thanks,
Clarke

Clarke Thurmon
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 10, Office of Regional Counsel
1200 Sixth Avenue, Suite 155
M/S ORC-113
Seattle, WA 98101
Desk (206) 553-2585
Fax (206) 553-1762
Thurmon.Clarke@EPA.gov

From: Contreras, Peter
Sent: Monday, November 26, 2018 4:46 PM
To: Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

Here's the revised version as of 4pm meeting …. Marie/OWW to finalize pending OK by Wenona (checking in with Chris)

Peter Contreras, Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Contreras, Peter
Sent: Monday, November 26, 2018 3:22 PM
To: Jennings, Marie <Jennings.Marie@epa.gov>; Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY -- REDRAFT of Letter

All: For discussion at 4pm . . . Here is the updated letter based on Ricardi, Clarke, Jenna, Cara and my collective editing. Thanks to Clarke for facilitating our 2pm working session!

See everyone at 4pm Stehekin to finalize letter/answer any question.

Thanks,

Peter

Peter Contreras, Manager
UST | UIC | DW Compliance
Office of Compliance and Enforcement
Seattle (206) 553-6708

From: Jennings, Marie
Sent: Monday, November 26, 2018 2:34 PM
To: Wilson, Wenona <Wilson.Wenona@epa.gov>; Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>; Carre, Kristine <Carre.Kristine@epa.gov>; Murphy, Stacy <Murphy.Stacy@epa.gov>; Szerlog, Michael <Szerlog.Michael@epa.gov>
Cc: Hamlin, Tim <Hamlin.Tim@epa.gov>; McCullough, Barbara <McCullough.Barbara@epa.gov>; Pepple, Karl <Pepple.Karl@epa.gov>; Carvalho, Gabriela <Carvalho.gabriela@epa.gov>; McMonagle, Rick <mcmonagle.richard@epa.gov>
Subject: RE: 11/28 Warm Springs Briefing--REPLY

Hi Wenona

Below is a slightly more detailed summary of the Drinking Water Treatment Plant. Feel free to cut it down, if this is too much information. This information was taken from the briefing document that Ricardi initiated and Clarke Thurmon and I provided edits.

Drinking Water Treatment Plant

The Warm Springs public water system (PWS or System) is one of three PWSs on the Warm Springs Reservation for which EPA has primacy. The other two Systems, Sidwater and Simnashoo Schoolie, unlike Warm Springs which is a surface water system, are ground water Systems.
The Warm Springs Water Treatment Plant was originally constructed in 1980, with improvements completed in 2000 to automate the system and make process control improvements. The water treatment plant has a designed capacity of approximately 4.3 mgd (3,000 gpm). Warm Springs CWS serves approximately 3800 persons. The watershed is a relatively isolated and undeveloped basin but may be impacted by cattle grazing on open rangeland and two upstream discharges Warm Springs Wastewater Plant effluent and a lumber mill.

b5 - Attorney Client / Deliberative Process

(b)(5) Attorney Client Privilege / Deliberative Process

Marie Jennings
Drinking Water Unit, Manager
206-553-1893
206-369-9625 - EPA cell

From: Wilson, Wenona <Wilson.Wenona@epa.gov>
Sent: Monday, November 26, 2018 1:20 PM
To: Opalski, Dan <Opalski.Dan@epa.gov>; Kowalski, Edward <Kowalski.Edward@epa.gov>; Jennings, Marie <Jennings.Marie@epa.gov>; Contreras, Peter <Contreras.Peter@epa.gov>; Manheimer, Jenna <Manheimer.Jennifer@epa.gov>; Thurmon, Clarke <Thurmon.Clarke@epa.gov>; Chung, Angela <Chung.Angela@epa.gov>; Duvil, Ricardi <duvil.ricardi@epa.gov>; Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>; Kenknight, Jeff <Kenknight.Jeff@epa.gov>; Carre, Kristine <Carre.Kristine@epa.gov>; Murphy, Stacy <Murphy.Stacy@epa.gov>; Szerlog, Michael <Szerlog.Michael@epa.gov>
Cc: Hamlin, Tim <Hamlin.Tim@epa.gov>; McCullough, Barbara <McCullough.Barbara@epa.gov>; Pepple, Karl <Pepple.Karl@epa.gov>; Carvalho, Gabriela <Carvalho.gabriela@epa.gov>; McMonagle, Rick <mcmonagle.richard@epa.gov>
Subject: 11/28 Warm Springs Briefing

Hi team, below is my suggested agenda for the RA/DRA briefing to prepare Chris for our Dec 4 meeting with the Warm Springs Tribal Council. The briefing is scheduled, Wednesday, 11/28, from 2:30-3:30 p.m. Please let me know if you have recommended changes to the briefing agenda.

I've attached a general briefing paper and the Treaty, which Tribal Coordinator Kris Carre, submitted. Thanks Kris! If you plan to submit additional information, please send to Pam Gahner and me ASAP.

2:30 Brief overview of Dec 4 visit – Wenona Wilson (5)
2:35 Tribal background (including landfill/other env. issues) - Kris Carre (10)
2:45 Wastewater Treatment Facility – Enforcement Program (10)

2:55 Warm Springs Water Treatment Plant – Water Program (25)
3:20 Next Steps

Thank you,
Wenona Wilson
Senior Tribal Policy Advisor
EPA Region 10
(206) 553-2148


UNITED STATES
ENVIRONMENTAL PROTECTION

From: Thurmon, Clarke
To: Duvil, Ricardi
Cc: Steiner-Riley, Cara
Subject: RE: Boil Water Notice - Warm Springs
Date: Tuesday, November 13, 2018 4:08:44 PM
Attachments: Warm Springs Water System 111318_CTedits_111318.docx

---

Ricardi,

Hi.

Thanks for letting me know about this issue. (b)(5) Attorney Client Privilege / Deliberative Process

Please give me a call if you have any questions.

Thanks,

Clarke

Clarke Thurmon
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 10, Office of Regional Counsel
1200 Sixth Avenue, Suite 155
M/S ORC-113
Seattle, WA 98101
Desk (206) 553-2585
Fax (206) 553-1762
Thurmon.Clarke@EPA.gov

From: Duvil, Ricardi
Sent: Tuesday, November 13, 2018 2:11 PM
To: Thurmon, Clarke <Thurmon.Clarke@epa.gov>
Subject: Boil Water Notice

I left you a voicemail.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

From: Opalski, Dan
Sent: Tuesday, November 13, 2018 4:46 PM
To: Jennings, Marie
Cc: Duvil, Ricardi
Subject: RE: Boil Water Notice - Warm Springs--Quick Reply needed
Attachments: Warm Springs Water System_11_13_18do.docx

I have suggested some edits in the attached version. Note most of them are not substantive, b5 - Deliberative Process

Thanks.

From: Jennings, Marie
Sent: Tuesday, November 13, 2018 4:32 PM
To: Opalski, Dan <Opalski.Dan@epa.gov>
Subject: FW: Boil Water Notice - Warm Springs--Quick Reply needed

Hi Dan

Ricardi and I have been working with Clarke to get this letter to the water system this evening. The hospital and child care facilities are reluctant to open until they have heard from EPA.

Marie J.

From: Duvil, Ricardi <duvil.ricardi@epa.gov>
Sent: Tuesday, November 13, 2018 4:29 PM
To: Jennings, Marie <Jennings.Marie@epa.gov>
Subject: FW: Boil Water Notice - Warm Springs

Hi Marie:

Attached is the letter for Warm Spring Water System to lift the Boil Water Notice . I incorporated Clarke's edits as well.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

From: Thurmon, Clarke
Sent: Tuesday, November 13, 2018 4:09 PM

To: Duvil, Ricardi <duvil.ricardi@epa.gov>
Cc: Steiner-Riley, Cara <Steiner-Riley.Cara@epa.gov>
Subject: RE: Boil Water Notice - Warm Springs

Ricardi,

Hi.
Thanks for letting me know about this issue. (b)(5) Attorney Client Privilege / Deliberative Process

Please give me a call if you have any questions.

Thanks,
Clarke

Clarke Thurmon
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 10, Office of Regional Counsel
1200 Sixth Avenue, Suite 155
M/S ORC-113
Seattle, WA 98101
Desk (206) 553-2585
Fax (206) 553-1762
Thurmon.Clarke@EPA.gov

From: Duvil, Ricardi
Sent: Tuesday, November 13, 2018 2:11 PM
To: Thurmon, Clarke <Thurmon.Clarke@epa.gov>
Subject: Boil Water Notice

I left you a voicemail.

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

From: Duvil, Ricardi
To: Jennings, Marie
Subject: Letter
Date: Thursday, December 20, 2018 4:10:00 PM
Attachments: Warm Springs Water System_NOD Letter_ Response_12.20.2018_final.pdf
Copy of CAP Warm Springs July_ Sanitary Survey-2018.xlsx

(b)(5) Deliberative Process

Cheers,

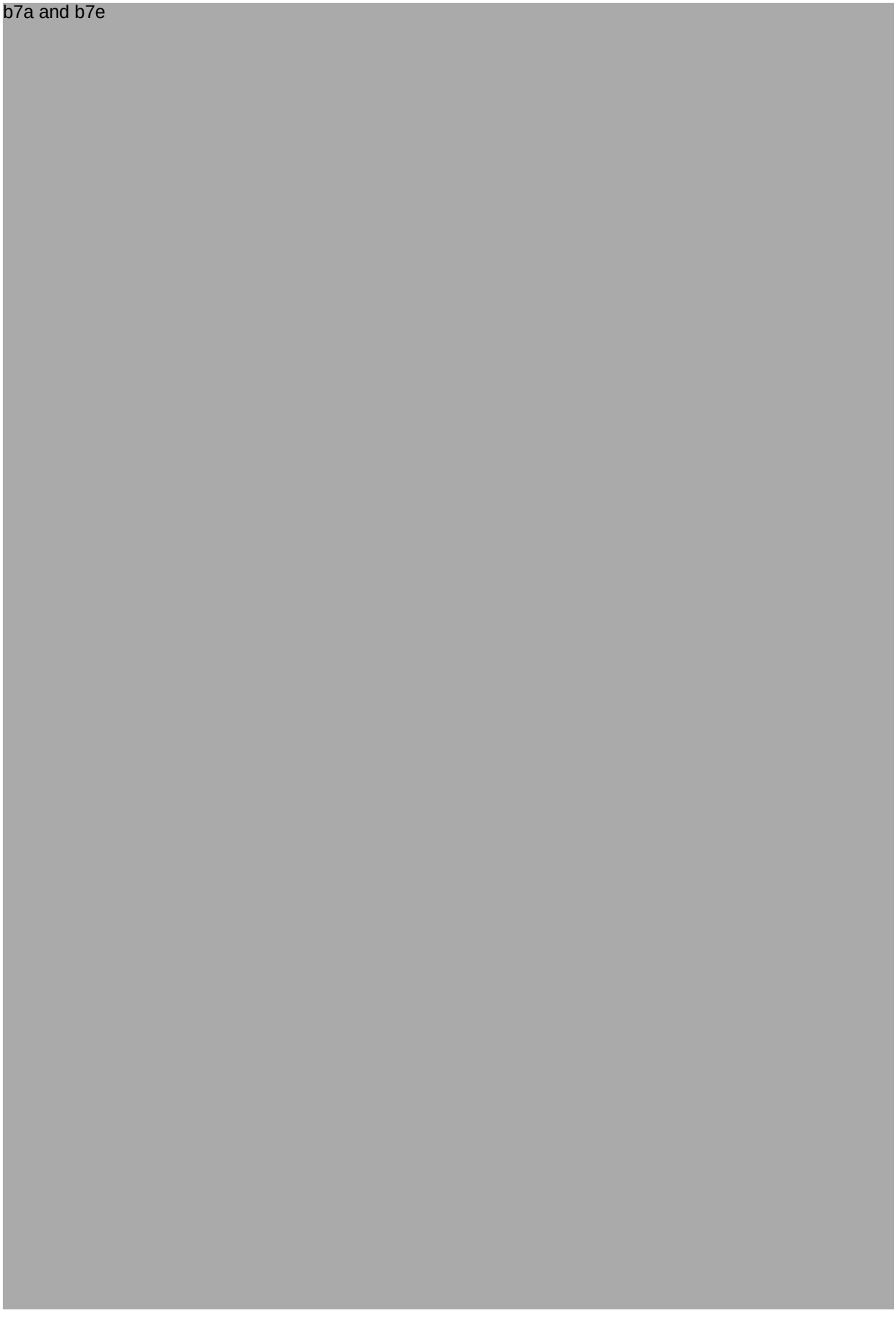
Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280

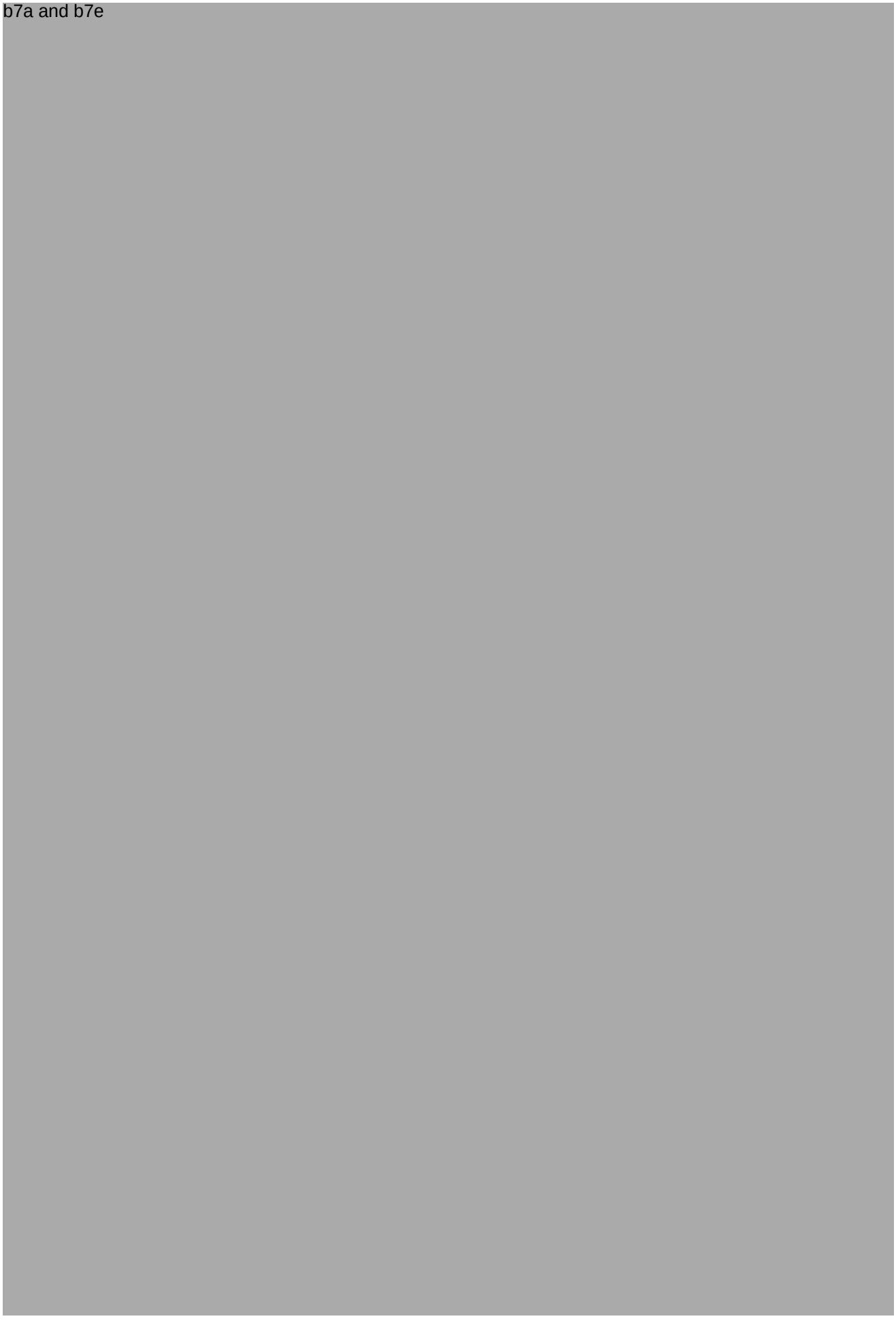
From: Duvil, Ricardi
To: Contreras, Peter
Subject: Response to Warm Springs Water Treatment
Date: Tuesday, December 18, 2018 4:11:00 PM
Attachments: Warm Springs Water System_NOD Letter_ Response_12.18.2018.docx

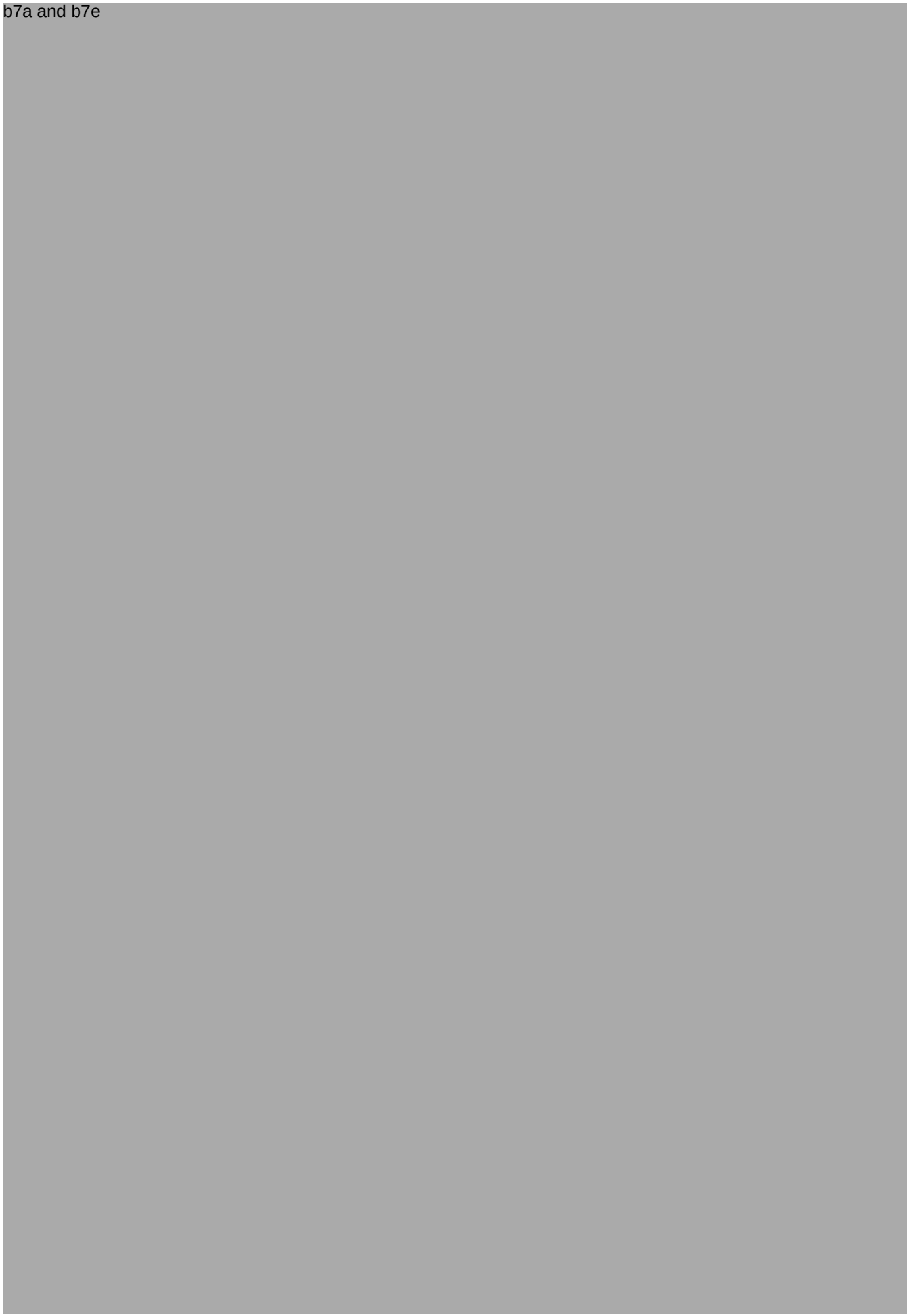
---

Cheers,

Ricardi Duvil, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Office of Water and Watersheds
Drinking Water Unit, Region 10
1200 Sixth Ave., Suite 155, OWW-193
Seattle, WA 98101
Phone: (206)-553-2578
Fax: (206)-553-1280


b7a and b7e


b7a and b7e


b7a and b7e

b7a and b7e

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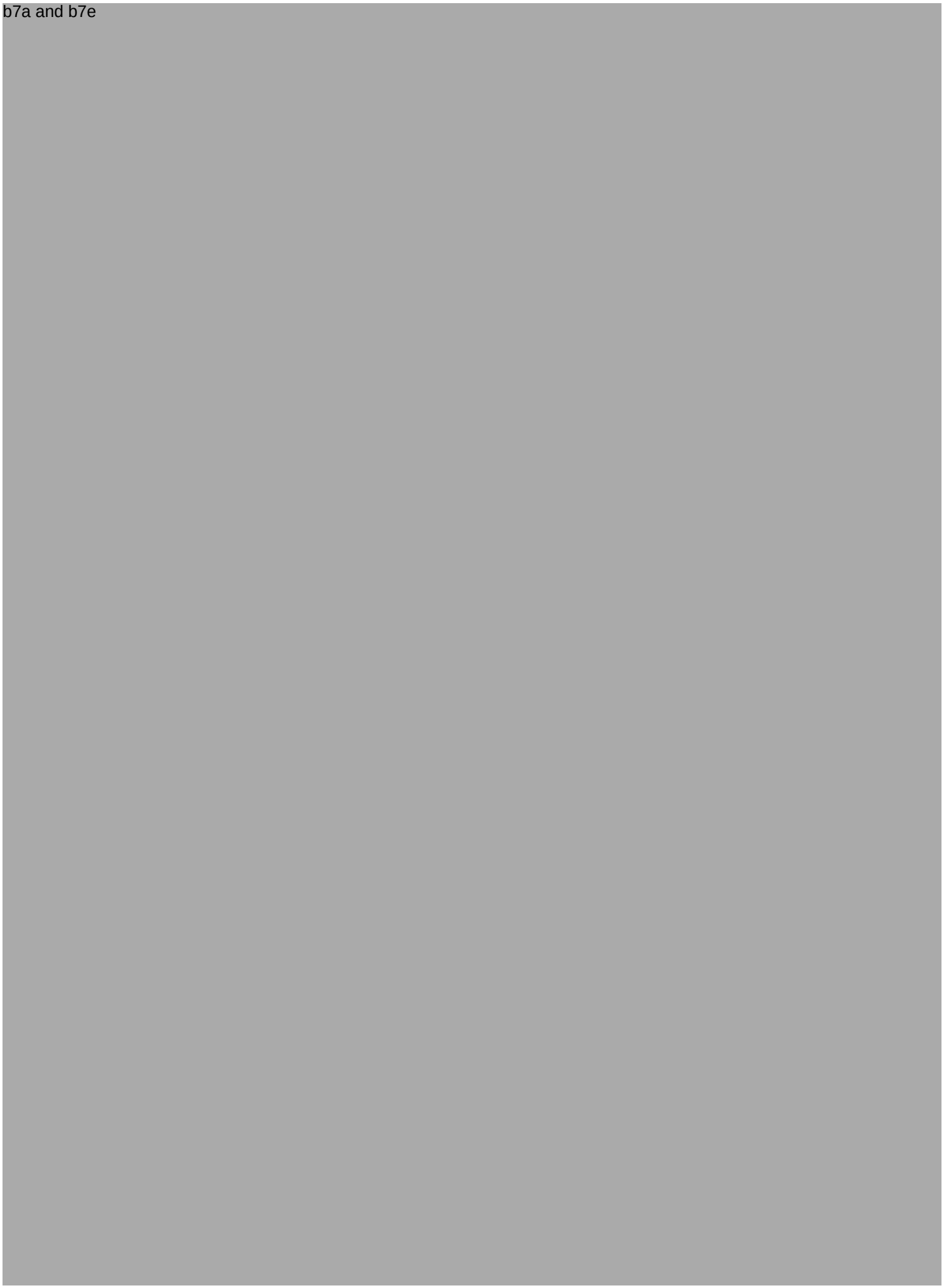

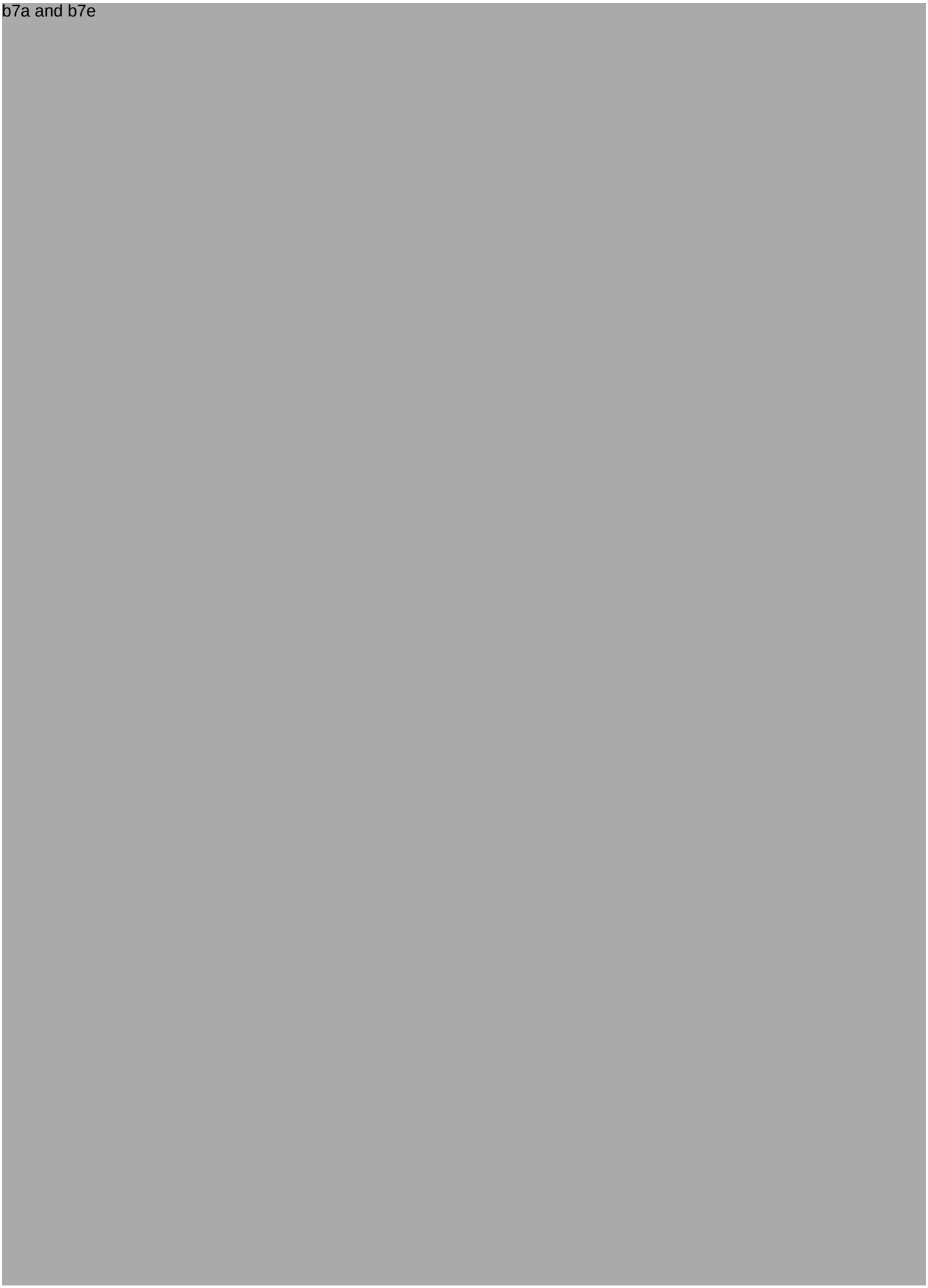
b7a and b7e

EPA United States Environmental Protection Agency

Comprehensive Surface Water Treatment Rules Quick Reference Guide: Systems Using Conventional or Direct Filtration

Overview of the Rules

Title	**Surface Water Treatment Rule** (SWTR) - 40 CFR 141.70-141.75 **Interim Enhanced Surface Water Treatment Rule** (IESWTR) - 40 CFR 141.170-141.175 **Filter Backwash Recycling Rule** (FBRR) - 40 CFR 141.76 **Long Term 1 Enhanced Surface Water Treatment Rule** (LT1ESWTR) - 40 CFR 141.500-141.571
Purpose	Improve public health protection through the control of microbial contaminants, particularly viruses, *Giardia*, and *Cryptosporidium*.
General Description	The **Surface Water Treatment Rules**: ▸ Applies to all public water systems (PWSs) using surface water or ground water under the direct influence of surface water (GWUDI), otherwise known as "**Subpart H systems.**" ▸ Requires <u>all</u> Subpart H systems to disinfect. ▸ Requires Subpart H systems to filter unless specific filter avoidance criteria are met. ▸ Requires individual filter monitoring and establishes combined filter effluent (CFE) limits. ▸ Applies a treatment technique requirement for control of microbials.

Overview of Requirements

The purpose of this table is show how the requirements for the IESWTR and LT1ESWTR build on the existing requirements established in the original SWTR.

APPLICABILITY: PWSs that use surface water or ground water under the direct influence of surface water (Subpart H) that practice conventional or direct filtration.		**Final Rule Dates**			
		SWTR 1989	**IESWTR 1998**	**LT1ESWTR 2002**	**FBRR 2001**
Population Served	≥10,000	✓	✓		✓
	< 10,000	✓	N/A (except for sanitary survey provisions)	✓	✓
Regulated Pathogens	99.99% (4-log) removal/inactivation of viruses	✓	Regulated under SWTR	Regulated under SWTR	Regulated under SWTR
	99.9% (3-log) removal/inactivation of *Giardia lamblia*	✓	Regulated under SWTR	Regulated under SWTR	Regulated under SWTR
	99% (2-log) removal of Cryptosporidium		✓	✓	Regulated under IESWTR & LT1ESWTR
Residual Disinfectant Requirements	Entrance to distribution system (≥0.2 mg/L)	✓	Regulated under SWTR	Regulated under SWTR	
	Detectable in the distribution system	✓	Regulated under SWTR	Regulated under SWTR	
Turbidity Performance Standards	Combined Filter Effluent	✓	✓	✓	
	Individual Filter Effluent		✓	✓	
Disinfection Profiling & Benchmarking	Systems must profile inactivation levels and generate benchmark, if required		✓	✓	
Sanitary Surveys (state requirement)	CWS: Every 3 years NCWS: Every 5 years		✓	Regulated under IESWTR	
Covered Finished Reservoirs/Water Storage Facilities (new construction only)			✓	✓	
Operated by Qualified Personnel as Specified by State		✓	Regulated under SWTR	Regulated under SWTR	Regulated under SWTR

(CWS) Community Water System (NCWS) Non-community Water System

Turbidity

There are two ways turbidity is measured: **Combined Filter Effluent (CFE)** and **Individual Filter Effluent (IFE)**.

Turbidity: Monitoring and Reporting Requirements

Turbidity Reporting Requirements *(Reports due by the 10th day of the following month the system serves water to the public.)*	**Monitoring/ Recording Frequency**	**SWTR As of June 29, 1993**	**IESWTR ≥ 10,000 people As of January 1, 2002**	**LT1ESWTR < 10,000 people As of January 1, 2005**
CFE 95% Value Report total number of CFE measurements and number and percentage of CFE measurements ≤ 95th % limit.	At least every 4 hours*	≤ 0.5 NTU	≤ 0.3 NTU	≤ 0.3 NTU
CFE Maximum Value Report date and value of any CFE measurement that exceeded CFE maximum limit.	At least every 4 hours*	5 NTU Contact state within 24 hours	1 NTU Contact state within 24 hours	1 NTU Contact state within 24 hours
IFE Monitoring Report IFE monitoring conducted and any follow-up actions.	Monitor continuously every 15 minutes	None	Monitor–exceedances require follow-up action	Monitor–exceedances require follow-up action. Systems with 2 or fewer filters may monitor CFE continuously in lieu of IFE.

*Monitoring frequency may be reduced by the state to once per day for systems serving 500 or fewer people.

IFE Follow-Up and Reporting Requirements

Condition	**IESWTR (≥ 10,000)**			**LT1ESWTR (< 10,000) ****		
	Action	**Report**	**By**	**Action**	**Report**	**By**
2 consecutive recordings >0.5 NTU taken 15 minutes apart at the end of the first 4 hours of continuous filter operation after backwash/offline:	Produce filter profile within 7 days (if cause not known)	▸ Filter # ▸ Turbidity value ▸ Date ▸ Cause (if known) or report profile was produced	10th of the following month			
2 consecutive recordings > 1.0 NTU taken 15 minutes apart:	Produce filter profile within 7 days (if cause not known)	▸ Filter # ▸ Turbidity value ▸ Date ▸ Cause (if known) or report profile was produced	10th of the following month		▸ Filter # ▸ Turbidity value ▸ Date ▸ Cause (if known)	10th of the following month
2 consecutive recordings > 1.0 NTU taken 15 minutes apart at the same filter for **3 months in a row**:	Conduct filter self-assessment within 14 days	▸ Filter # ▸ Turbidity value ▸ Date ▸ Report filter self-assessment produced	10th of the following month	Conduct a filter self-assessment within 14 days. Systems with 2 filters that monitor CFE in lieu of IFE must do both filters.	▸ Date filter self-assessment triggered & completed	10th of the following month (or within 14 days of filter self-assessment being triggered if triggered in last 4 days of the month)
2 consecutive recordings > 2.0 NTU taken 15 minutes apart at the same filter for 2 months in a row:	Arrange for CPE within 30 days & submit report within 90 days	▸ Filter # ▸ Turbidity value ▸ Date	10th of the following month	Arrange for CPE within 60 days & submit CPE report within 120 days	▸ Date CPE triggered	10th of the following month
		Submit CPE report	90 days after exceedance		Submit CPE report	120 days after exceedance

** Systems serving fewer than 10,000 people must begin complying with these requirements beginning January 1, 2005.

IFE performance is measured in systems using conventional or direct filtration. The performance of each individual filter is critical to controlling pathogen breakthrough. The **CFE** turbidity results may mask the performance of an individual filter since the individual filter may have a turbidity spike of a short duration not detected by 4 hour CFE readings.

The IESWTR and LT1ESWTR created more stringent CFE turbidity standards and established a new IFE turbidity monitoring requirement to address *Cryptosporidium*. These new turbidity standards assure conventional and direct filtration systems will be able to provide 2-log *Cryptosporidium* removal.

Disinfection

Disinfection must be sufficient to ensure that the total treatment process (disinfection plus filtration) of the system achieves at least:

- 99.9% (3-log) inactivation and/or removal of *Giardia lamblia*.
- 99.99% (4-log) inactivation and/or removal of viruses.

Cryptosporidium must be removed by filtration and no inactivation credits are currently given for disinfection. Systems must also comply with the maximum residual disinfectant level (MRDL) requirements specified in the Stage 1 Disinfectants/ Disinfection Byproducts Rule (Stage 1 DBPR).

Residual Disinfectant Monitoring and Reporting Requirements

Location	Concentration	Monitoring Frequency	Reporting (Reports due 10th of the following month)
Entry to distribution system.	Residual disinfectant concentration cannot be < 0.2 mg/L for more than 4 hours.	Continuous, but states may allow systems serving 3,300 or fewer persons to take grab samples from 1 to 4 times per day, depending on system size.	Lowest daily value for each day, the date and duration when residual disinfectant was < 0.2 mg/L, and when state was notified of events where residual disinfectant was < 0.2 mg/L.
Distribution system - same location as total coliform sample location(s).	Residual disinfectant concentration cannot be undetectable in greater than 5% of samples in a month, for any 2 consecutive months. Heterotrophic plate count (HPC) ≤ 500/mL is deemed to have detectable residual disinfectant.	Same time as total coliform samples.	Number of residual disinfectant or HPC measurements taken in the month resulting in no more than 5% of the measurements as being undetectable in any 2 consecutive months.

Disinfection Profiling and Benchmarking Requirements

A **disinfection profile** is the graphical representation of a system's microbial inactivation over 12 consecutive months.

A **disinfection benchmark** is the lowest monthly average microbial inactivation value. The disinfection benchmark is used as a baseline of inactivation when considering changes in the disinfection process.

Disinfection Profiling and Benchmarking Requirements Under IESWTR & LT1ESWTR

The purpose of disinfection profiling and benchmarking is to allow systems and states to assess whether a change in disinfection practices creates a microbial risk. Systems should develop a disinfection profile that reflects *Giardia lamblia* inactivation (systems using ozone or chloramines must also calculate inactivation of viruses), calculate a benchmark (lowest monthly inactivation) based on the profile, and consult with the state prior to making a significant change to disinfection practices.

REQUIREMENT	IESWTR	LT1ESWTR
AFFECTED SYSTEMS:	Community, non-transient non-community, and transient systems.	Community and non-transient non-community systems only.
BEGIN PROFILING BY:	April 1, 2000	▸ July 1, 2003 for systems serving 500-9,999 people. ▸ January 1, 2004 for systems serving fewer than 500 people.
FREQUENCY & DURATION:	**Daily** monitoring for 12 consecutive calendar months to determine the total logs of *Giardia lamblia* inactivation (and viruses, if necessary) for each day in operation.	**Weekly** inactivation of *Giardia lamblia* (and viruses, if necessary), on the same calendar day each week over 12 consecutive months.
STATES MAY WAIVE DISINFECTION PROFILING REQUIREMENTS IF:	TTHM annual average <0.064 mg/L and HAA5 annual average <0.048 mg/L: ▸ Collected during the same period. ▸ Annual average is arithmetic average of the quarterly averages of four consecutive quarters of monitoring. ▸ At least 25% of samples at the maximum residence time in the distribution system. ▸ Remaining 75% of samples at representative locations in the distribution system.	One TTHM sample <0.064 mg/L and one HAA5 sample <0.048 mg/L: ▸ Collected during the month of warmest water temperature; **AND** ▸ At the maximum residence time in the distribution system. Samples must have been collected after January 1, 1998.
DISINFECTION BENCHMARK MUST BE CALCULATED IF:	Systems required to develop a disinfection profile and are considering any of the following: ▸ Changes to the point of disinfection. ▸ Changes to the disinfectant(s) used. ▸ Changes to the disinfection process. ▸ Any other modification identified by the state. Systems must consult the state prior to making any modifications to disinfection practices.	Same as IESWTR, and systems must obtain state approval prior to making any modifications to disinfection practices.

Filter Backwash Recycling Rule

The FBRR applies to PWSs that use surface water or ground water under the direct influence of surface water, practice conventional or direct filtration, and recycle spent filter backwash, thickener supernatant, or liquids from dewatering processes. The FBRR requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state. The FBRR was developed to improve public health protection by assessing and changing, where needed, recycle practices for improved contaminant control, particularly microbial contaminants. Systems were required to submit recycle notification to the state by December 8, 2003.

Filter Backwash Critical Deadlines and Requirements

June 8, 2004	▸ Return recycle flows through the processes of a system's existing conventional or direct filtration system or an alternate recycle location approved by the state (a 2-year extension is available for systems making capital improvements to modify the recycle return location). ▸ Collect recycle flow information and retain on file.
June 8, 2006	Complete all capital improvements associated with relocating recycle return location (if necessary).